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HANDBOOK

FOR

WIRELESS TELEGRAPH OPERATORS

WORKING INSTALLATIONS LICENSED BY

HIS MAJESTY'S POSTMASTER-GENERAL.

REVISED IN ACCORDANCE WITH THE RADIOTELEGRAPH CONVENTION OF LONDON, 1912.

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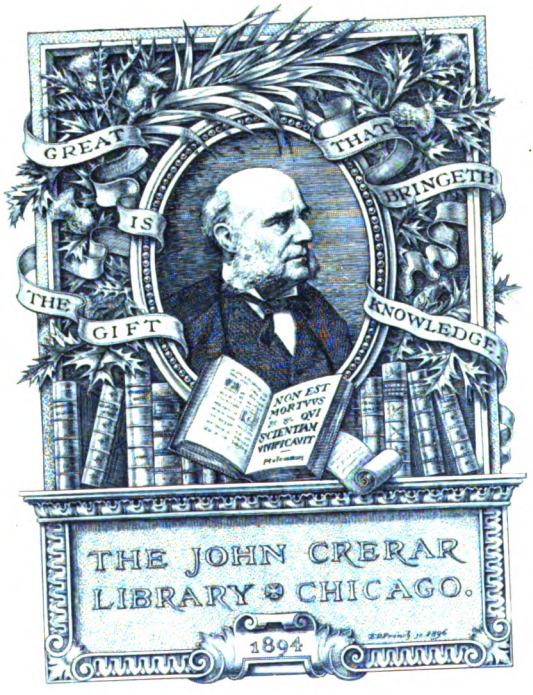
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NOTE.

For convenience of reference, this book is divided into six parts as follows :—

I. Introductory and General.

II. Form and acceptance of radiotelegrams.

III. Special supplementary services.

IV. Charges, Accounts, and Reimbursements.

V. Procedure to be observed in transmission.

VI. Complete copy of the Service Regulations annexed to the International Radiotelegraph Convention of London, 1912.

The initials *S.R.* in the notes against various sections of this book, followed by numbers, indicate the relative article and paragraph of these Regulations.

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I.—INTRODUCTORY AND GENERAL.

Purpose of this Handbook.

1. This book is intended as a manual for the guidance of wireless telegraph operators on board ship and at coast stations with regard to the acceptance and treatment of radiotelegrams, the transmission and receipt of signals, and other details of actual working. It does not in any way deal with the scientific principles of wireless telegraphy, the details of apparatus, or the differences of the various systems. For the most part the instructions apply primarily to operators on board ship, but for the sake of completeness certain instructions have been added which apply only to operators at coast stations.

License necessary for every Wireless Telegraph Station.

2. Before a wireless telegraph station can be installed for any purpose, whether commercial or experimental, by any private person or company in the United Kingdom or on board a ship registered in the United Kingdom, a license must be obtained from the Postmaster-General. Each license lays down certain restrictions in regard to the electrical energy and wave-lengths to be used, and similar matters. Operators should take care that, so far as in them lies, these restrictions are duly observed. [*S.R.* 9.]

The radiotelegraphic service of a ship station is placed under the authority of the commander of the ship. [*S.R.* 10. 4.]

Inspection of Stations.

3. All stations, whether open for public correspondence or not, will be inspected from time to time by officers appointed for that purpose by the Postmaster-General, in order to ascertain whether the conditions imposed by the licenses are being complied with. [*S.R.* 9. 2.] It will be the duty of operators to afford these officers every facility for such inspection.

The competent authorities of the countries where a ship calls may demand the production of its licence, and failing its production, may inspect the apparatus in order to satisfy themselves that it conforms to the International Regulations. [*S.R.* 9. 2.]

Regulations as to Power, Wave-Lengths, &c.

4.—(*a*) Communications between a coast station and a ship station, or between two ship stations, must be exchanged on both sides by means of the same wave-length. In case of difficulty of communication the wave-length may be altered by mutual

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consent; but both stations must resume their normal wave-lengths when the communication is completed. [*S.R.* 4.]

(*b*) The waves emitted must be as pure and as little damped as possible. The use of "plain aerial" is prohibited except in the case of signals of distress and in small stations where the primary power does not exceed 50 watts. [*S.R.* 7. 2 (*a*).]

"Plain aerial" is defined as a transmitting device in which the waves emitted are obtained by discharging the aerial directly by sparks. [*S.R.* 7. 2 (*a*).]

(*c*) The apparatus must be capable of transmitting and receiving at a speed of not less than 20 words a minute, five letters being counted as one word. [*S.R.* 7. 2 (*b*).]

Special Regulations for Ship Stations.

5—(*a*) The power imparted to the apparatus, measured at the terminals of the generator of the station, must not, in normal circumstances, exceed one kilowatt. Larger power may be used if the ship finds it necessary to transmit messages at a distance of more than 200 nautical miles from the nearest coast station, or if by reason of exceptional circumstances communication can only be effected by an increase of power. [*S.R.* 8.]

(*b*) The *normal* wave-length for ship stations is 600 metres, and every ship station must be installed in such a way as to be capable of using this wave-length and also a wave-length of 300 metres. For long-distance communication in exceptional circumstances [*see* Section 18] a wave-length of 1,800 metres may be used, and the use of wave-lengths not exceeding 600 metres may be authorised in special cases. [*S.R.* 3. 1.]

A special exception is made as regards ships of small tonnage, which it might be impossible to equip with plant producing a 600-metre wave. Such ships may be authorised to use a wave-length of 300 metres for transmission; but they must be able to receive by means of the wave-length of 600 metres. [*S.R.* 3. 3.]

(*c*) During the whole time that it is open every ship station must be able to receive calls made by means of its normal wave-length. [*S.R.* 3. 2.]

(*d*) Every British ship will carry a copy of her license, showing the special restrictions (within these limits) which have been imposed in her particular case.

Wave-Lengths for Coast Stations.

6. For purposes of *general* public correspondence between ships and coast stations two wave-lengths only are to be used, viz., 600 and 300 metres. Every coast station open to general public correspondence will use *one* of these two wave-lengths, and will always be ready to receive calls on that wave-length. A coast station may be authorised by its

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license to use other wave-lengths (not exceeding 600, or exceeding 1,600 metres) for communication of a special character, such as long-distance communication or communication between the coast station and particular ships. Ships may also be licensed for *receiving* messages from coast stations authorised to carry on a long-distance service by means of wave-lengths exceeding 1,600 metres. They are not allowed, however, to *transmit* messages except by means of wave-lengths not exceeding 600 metres or a wave-length of 1,800 metres as specially provided in *S.R* 35 (*see* Section 18).

Obligation to communicate with all Systems.

7. All coast stations are bound to interchange radiotelegrams with ships of countries which have adhered to the International Convention without regard to the particular system of radiotelegraphy employed. Similarly ship stations are bound to interchange radiotelegrams with the ship or coast stations of those countries without regard to the system.

Signals of Distress.*

8. In case of distress the obligation to accept messages is absolute in the case of every station without distinction, and such messages must be accepted with priority over all other messages; they must be answered with similar priority, and the necessary steps must be taken at once to give effect to them. Further instructions in this respect will be found in Section 87.

Avoidance of Interference.*

9. Another general obligation which is imposed on all stations alike, and which is regarded as of the highest importance, is that they shall interfere as little as possible with the working of other stations. The rules of working are largely designed to prevent such interference.

Admiralty Signalling.

10. After distress signals, Admiralty signalling has precedence over all other communication (*see* Sections 60 and 88).

Official Lists of Stations.

11.—(*a*) The International Bureau of the Telegraph Union at Berne will publish periodically an official map showing coast

* *Note.*—Apart from Sections 8 and 9, to which *all* stations are subject, this Handbook does not apply to the working of naval and military stations. If, however, such stations desire to communicate with mercantile ships or coast stations, they must conform to the other Regulations contained in this Handbook.

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stations with their normal ranges, the principal lines of ships and the average time occupied in the voyages between their ports of call.

(*b*) The names of all licensed ship stations and of all coast stations open for public correspondence are found in the official lists of stations which are issued from time to time by the International Bureau of the Telegraph Union at Berne. These lists, which are made out in the form annexed to the Service Regulations of the Radiotelegraph Convention, give all necessary particulars as regards name, nationality, wave-lengths, coast and ship charges, &c. [*S.R.* 5.]

(*c*) The Bureau also issue a separate list of call signals showing the stations to which they are allotted.

(*d*) The lists also comprise such particulars with regard to other radiotelegraph stations (for instance, stations on ships of war) as are communicated to the International Bureau by the administrations to whose authority these stations are subject. [*S.R.* 5. 3.]

(*e*) In the case of two or more ships bearing the same name, the name of each ship will be followed by its call signal in the lists. The name and the call signal will in such cases be counted as one word. [*S.R.* 5. 5 and 15. 2.]

Operator's Certificate.

12. Every person operating a station on board a ship registered in the United Kingdom is required to hold a certificate of competency, conferred by the Postmaster-General after examination. The examination is designed to test the operator's practical knowledge of wireless telegraphy, within the limits prescribed in Appendix V., and his knowledge of the regulations contained in this handbook. The certificate states also that the operator has been bound to preserve the secrecy of correspondence.

The certificates are of two classes. First Class certificates will be granted to fully qualified operators whose speed of working is not less than 20 words a minute, and Second Class certificates to operators whose general qualifications are satisfactory but whose speed of working is only from 12 to 19 words a minute.

Operators holding Second Class certificates will only be allowed to take charge of the apparatus on ships which use radiotelegraphy for their own service, such as fishing vessels, or as substitutes on ships which have on board at least one First Class operator. Two First Class operators at least must be carried on ships whose stations are always open. [*S.R.* 10.]

A copy of the First Class certificate is given in Appendix VI. The Second Class certificate is in similar terms, except as regards the speed of working.

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Breach of Regulations.

13. In the case of a breach of the regulations, if the operator is found to be in fault the Postmaster-General (in the case of the United Kingdom and of ships registered therein) will take the necessary steps, and, if need be, endorse or withdraw his certificate.

If the fault is found to arise from causes not within the control of the operator, or from the instructions given to the operator by his employer, similar steps will be taken with regard to the license in respect of the station. [*S.R.* 12. 1.]

Repeated Breach by a Foreign Ship.

14. In the event of repeated breaches of the regulations by a foreign ship in communication with a coast station in the United Kingdom, if the representations made by the Postmaster-General to the administration to whose authority the ship is subject remain without effect, the Postmaster-General has power, after giving notice, to authorise coast stations in the United Kingdom to refuse communications (other than distress signals) from the ship in question. [*S.R.* 12. 2.]

It is the duty of operators, whether at coast or at ship stations, to report to the Postmaster-General, through their employers, any breach of the regulations which may come under their notice.

Duration of Service.

15. The service at coast stations is, as far as possible, continuous by day and night; but certain coast stations may provide a service of limited duration. [*S.R.* 13. 1.]

Ship stations are divided, as regards hours of working, into three classes:—

(1) Stations always open;
(2) Stations having limited working hours;
(3) Stations having no fixed working hours.

The license granted by the Postmaster-General will indicate to which class the ship belongs. [*S.R.* 13. 3.]

The actual hours of service at each station will be found in the list of stations issued by the International Bureau of the Telegraph Union. Stations of Class 2 must remain on watch during the first 10 minutes of each hour outside the appointed hours of service.

Those coast stations at which the service is of limited duration must not close before they have transmitted all their radio-

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telegrams to such ships as are within range, and have received from these ships all messages of which notice has been given. This also applies when ships notify their presence before work has actually ceased. [*S.R.* 13. 2.]

Power to be used.

16. All stations are bound to exchange messages with the minimum power required for obtaining effective communication. Operators must bear in mind the importance of this regulation, as it is often only by careful observance of it that interference with other stations can be avoided. [*S.R.* 7. 1.]

If a station desires to make use of high power (*i.e.*, for special purposes, such as the long range communication contemplated in Section 18), it must first send the signal — — · · — —, repeated three times on its normal power, as a warning to stations in its immediate vicinity. The high power transmission shall not commence until 30 seconds after this warning has been sent. [*S.R.* 27.]

Ships to communicate with the nearest Coast Station.

17. As a general rule, every ship station must transmit its ship-and-shore radiotelegrams to the nearest coast station. If, however, there is a choice between several coast stations at equal or nearly equal distances, preference must be given to a station in the country of destination of the radiotelegram or a station on the normal line of transit. [*S.R.* 35. 1.]

But in all cases the sender of a radiotelegram from a ship has the right to indicate the coast station through which he wishes it to be forwarded. If this is not the nearest, the ship station will hold the message until the coast station indicated by the sender is the nearest. Exceptionally, transmission may be made to a more distant coast station under the regulations laid down in section 18, which must be strictly observed.

When a ship station passes within range of a British coast station and is prevented from establishing communication it should notify the fact, by service advice, to the first British station with which it can communicate. Instructions will then be given for the redirection of any radiotelegrams for the ship which may be in hand at the coast station with which the ship failed to communicate.

Exceptional use of 1,800-Metre Wave-length.

18. Transmission to a distant coast station, as provided in Section 17, may only be made under the following conditions :—

(*a*) That the radiotelegram is intended for the country in which such coast station is situated and that it comes from a ship subject to that country ;

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(*b*) that for calls and transmission both stations use a wave-length of 1,800 metres ;

(*c*) that transmission by this wave-length does not disturb any transmission made, by means of the same wave-length, by a nearer coast station ;

(*d*) that the ship station is more than 50 nautical miles distant from any coast station shown in the Nomenclature. The distance of 50 miles may be reduced to 25 miles subject to the reservation that the maximum power at the terminals of the generator do not exceed 5 kilowatts and that the ship stations be established in conformity with *S.R.* 7 and 8 (*see* Sections 4 and 5). This reduction of distance shall not apply in the seas, bays or gulfs of which the shores belong to one country only and of which the opening to the high sea is less than 100 miles wide.

Time Signals and Meteorological Signals.

19. Certain stations will be denoted in the Official List as emitting Time or Meteorological signals at fixed times.

In order to avoid interference with these signals while they are being sent out, all stations within range should cease working, except in the cases of distress signals and Government telegrams. [*S.R.* 45. 3.] Meteorological information is supplied to coast stations for transmission to ships on request. [*S.R.* 45. 1.] Special arrangements may be made for the receipt of similar information from ships. [*S.R.* 45. 2.]

Wrecks and Casualties.

20. Ship stations are invited to furnish the coast stations with information respecting wrecks and casualties at sea, for the purpose of communication to marine agencies. [*S.R.* 45. 4.]

Radiophares.

21. Stations used exclusively for the despatch of signals intended to determine the position of ships must not use wave-lengths exceeding 150 metres, or operate over an area of greater radius than 30 miles. [*S.R.* 2. and 7. 3.]

Emergency Sets.

22. Ships equipped with wireless apparatus and coming under the first two classes of Section 15, are required to carry emergency apparatus, for use in the event of a breakdown of the main installation.

This apparatus must be placed in as safe a position as possible ; must be ready for use at short notice ; and must have a range of at least 80 miles in the case of ships of the first class, and 50 miles in the case of ships of the second class. It must be capable of working for at least six hours. [*S.R.* 11.]

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Note.—Every ship licensed by the Postmaster-General for wireless telegraphy, from which public radiotelegrams can be sent, must carry copies of the following documents :—

(i) Its wireless telegraph license.

(ii) This Handbook.

(iii) The International List of Telegraph Offices.

(iv) The Official List of Wireless Telegraph Stations.

(v) The Official List of Call Signals.

(vi) The latest issue of the Post Office Guide.

(vii) An adequate supply of telegraph forms of four kinds—

(1) for radiotelegrams sent from the ship,

(2) for radiotelegrams received by the ship,

(3) for service messages, whether sent or received,

(4) reply vouchers.

(viii) The Telegraph Tariffs of those countries with which it communicates most frequently.

Coast stations will be expected to be provided with copies of the documents numbered (i) to (vi), together with an adequate supply of telegraph forms.

Dangerous parts of the apparatus at each station should be marked and, if necessary, screened.

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II.—FORM AND ACCEPTANCE OF RADIOTELEGRAMS.

Address.

23. The sender is in every case responsible for the sufficiency and accuracy of the address of his radiotelegram.

The address of radiotelegrams intended for ships should be drawn up [*S.R.* 15. 1] as follows:—

(1) Name or description of addressee, with supplementary particulars if necessary.

(2) Name of the ship as in the first column of the Official List of Wireless Telegraph Stations;

and, if intended to be transmitted through a coast station,

(3) Name of the coast station as it appears in the Official List of Wireless Telegraph Stations.

If desired, the name of the ship may, at the risk of the sender, be replaced by the particulars of its voyage.

In the case of radiotelegrams accepted on board ship for places on land, it is the duty of the operator to see that the office of destination is written as shown in the first column of the International List of Telegraph Offices.

The name and permanent address *of the sender* should be written on the form for purposes of record.

Route.

24. In cases where there are more ordinary telegraph routes than one by which a radiotelegram from a ship may be transmitted to its ultimate destination from the country to which it is sent by wireless telegraphy, the sender may specify the route which he wishes to be followed. When the rates vary for different routes, a route should, as a rule, be specified by the sender, but in the case of radiotelegrams to places in North America viâ British coast stations, it is sufficient if the sender indicates whether transmission should be effected "viâ Cable" or "viâ Wireless." The route specified should be signalled by the operator to the coast station as part of the preamble of the radiotelegram.

The following abbreviations should be used in the case of radiotelegrams transmitted from ships to coast stations in the United Kingdom:—

For viâ Anglo-American Telegraph Company, "viâ Anglo."

For viâ Commercial Cable Company, "viâ Commercial."

For viâ Direct Spanish Telegraph Company, "viâ Spanish."

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For viâ Direct United States Cable Company, "viâ Direct."
For viâ Eastern Telegraph Company, "viâ Eastern."
For viâ Great Northern Telegraph Company, "viâ Northern."
For viâ Indo-European Telegraph Company, "viâ Indo."
For viâ French Telegraph Cable Company, "viâ PQ."
For viâ Marconi's Wireless Telegraph Co., "viâ Marconi."
For viâ Western Union Telegraph Company, "viâ Western Union."
For viâ France, Teneriffe, Noronha and Brazilian land lines, "viâ Talisman."
For Pacific Cable, "viâ Pacific."

Preamble.

25. The preamble of every radiotelegram should begin with the word "Radio," and should contain, in addition to the route (when specified), the other particulars set forth in section 75. [*S.R.* 14. 1.]

Sender's Instructions.

26. A sender, upon giving the necessary instructions and paying the requisite fees, may make use of the following special services, which are described in detail in Part III., namely:—

(*a*) Prepay a reply of any value to his radiotelegram;
(*b*) Have his radiotelegram repeated from office to office during transmission;
(*c*) Cancel, alter, or amplify a radiotelegram already transmitted;
(*d*) Have his radiotelegram delivered to more than one address or to a "Poste Restante" or "Télégraphe Restant";
(*e*) Have it delivered (in certain cases) by post or special means;
(*f*) Secure priority (or urgency) for his radiotelegram over the telegraph system of those Administrations which accept "urgent" telegrams. [*S.R.* 38.]

Undelivered Radiotelegrams.

27. When a radiotelegram reaching a ship at sea cannot be delivered, the office or ship station of origin must be informed by service advice (*see* Appendix IV.). In the case of radiotelegrams received through coast stations this information should be sent, if possible, through the coast station concerned; but, if circumstances require, it may be sent through another coast

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station of the same country, or of a neighbouring country, or through another ship station.

When a radiotelegram from a ship at sea cannot be delivered to the addressee on land, the coast station should be informed by the office of destination. The operator must then compare the address on the original form with that given in the advice of non-delivery and send a correcting service message if any discrepancy appears. In the absence of any discrepancy, the information must be transmitted, if possible, to the ship of origin, if necessary by way of another coast station of the same country or of a neighbouring country, or another ship station. The ship station operator must, in his turn, compare the address on the notice with that on the form handed in by the sender, and, if possible, correct any error by means of a service advice, transmitted by way of the original coast station, another coast station of the same or a neighbouring country, or another ship station. Should no error be disclosed, the sender should be informed of the non-delivery of his message and the reason assigned for it. A sender desiring to alter or add to an address can only do so by means of a paid service message (*see* Section 50). [*S.R.* 36.]

Procedure when the Ship cannot be reached.

28. The sender of a radiotelegram to a ship may indicate the maximum period for which he desires the message to be kept at the coast station. If the ship does not communicate with the coast station within that period it will be the duty of the operator at that station to send a service advice to the office of origin accordingly (*see* Appendix IV.).

If the sender does not specify any period, the office of origin should be informed by service advice on the morning of the 8th day after the despatch of the radiotelegram that it has not been possible to deliver the message to the ship of destination. The sender, who will be informed by the office of origin, may then, if he chooses, request, by means of a prepaid telegraphic or postal service message to the coast station (the prepayment being at the rate for a message to the coast station, without payment of the wireless rate either for the coast station or for the ship) that the radiotelegram may be retained for a further period of 9 days, and so on. If no such request is received, the radiotelegram should be treated as undeliverable at the end of the 9th day (not including the day of handing in).

However, if the coast station knows that the ship has passed beyond its range of transmission before the radiotelegram could be transmitted to it, the office of origin should be informed accordingly by service advice without delay (*see* Appendix IV.). The sender may, by paid service advice, request the coast station

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to transmit the radiotelegram when the ship next passes. [*S.R.* 37.]

Classes of Telegrams not admitted in Radiotelegraphic Service.

29. Certain special classes of telegrams, which are admitted in the international telegraph service, cannot be accepted in the radiotelegraphic service. They are as follows:—

(*a*) Telegraph money orders.
(*b*) Telegrams "to follow the addressee." (*See* P.O. Guide under this head.)
(*c*) Paid service telegrams asking for repetition or information, except as regards transmission over the ordinary telegraph system.
(*d*) Urgent telegrams, except as regards transmission over the telegraph system of Administrations which accept such telegrams (*see also* Section 47).
(*e*) Telegrams at deferred rates, or night and week-end cable letters. [*S.R.* 38.]

Forms and Duplicates of Radiotelegrams.

30. A duplicate of each radiotelegram delivered to a person on board ship must be made out at the time of receipt. The duplicate forms should show, in addition to the actual message and the usual service particulars, the date and time of its receipt, the time at which it was delivered to the addressee, and (if received through a coast station) the name of the coast station.

In the case of radiotelegrams handed in on board ship the particulars transmitted in the preamble should be entered on the form, together with the total amount charged, the date and time of transmission to the coast or ship station, and the name of such station. A note should also be made of any other point likely to affect the accounts, as, for instance, the failure to obtain an acknowledgment of receipt.

The forms of radiotelegrams accepted and the duplicates of those delivered on board ship must be sent, so far as possible, in monthly batches to the Comptroller and Accountant-General, G.P.O., London, or disposed of as may be arranged between the Postmaster-General and the licensee or the company operating the ship station, and proper precautions must be taken to ensure their secrecy.

Language.

31. Radiotelegrams can be sent in plain language, code language, or cypher, except in the case of certain countries (shown in the table of telegraph tariffs in the Post Office Guide) which do not admit code or cypher telegrams, or admit them under certain restrictions only.

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(*a*) PLAIN LANGUAGE.

Radiotelegrams in plain language are those composed of words, figures, and letters which offer an intelligible meaning. They may be expressed in any of the principal European languages, and certain others. The words and letters must be written in Roman characters.

(*b*) CODE LANGUAGE.

Code language is composed of real words not forming intelligible phrases, or of artificial words, consisting of groups of letters. Whether genuine or artificial, the words must be formed of syllables pronounceable according to the current usage of one of the following languages:—English, French, German, Italian, Spanish, Portuguese, Dutch, and Latin. No code word must exceed 10 letters in length.

Combinations formed by running together two or more real words (whole or contracted), or a real word and some other expression, are prohibited.

(*c*) CYPHER.

Cypher is composed of:—

(*a*) Arabic figures or groups or series of Arabic figures having a secret meaning, or letters or groups or series of letters having a secret meaning;

(*b*) Combinations of letters not fulfilling the conditions applicable to plain language or code.

Letter and figure cypher cannot be combined in one group.

Counting of Words (see Section 40 for Examples).

32.—(*a*) The number of words counted for purposes of charge should include all that the sender writes on the telegraph form to be transmitted. No charge is to be made for the transmission of the particulars in the preamble.

(*b*) In the address (which must consist of at least two words) of a radiotelegram from a ship, the name of the telegraph office of destination, including any indication of the country or district added in the first column of the International List of Telegraph Offices to distinguish it from other offices of the same name, is counted and charged for as one word, irrespective of its length. The operator should join up the words composing the name of the office of destination (if written as shown in the List), and signal it as one word.

The name of the country or district, if added unnecessarily by the sender, is charged for as a single word, provided that it is written as it appears in the second column of the List, or in the alternative form shown in the preface.

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(c) In the address of a radiotelegram to a ship, the name of the ship, with any supplementary indications shown in the first column of the Official List of Radiotelegraph Stations, is counted and charged for as one word, irrespective of its length. [*S.R.* 15. 2.] Similarly, the name of the coast station, when included in the address, is counted and charged for as one word.

The rest of the address is counted in accordance with the rules for counting plain language.

33. In plain language, the maximum number of letters allowed to pass at the charge for a single word is 15, any excess being charged for at the rate of 15 letters to a word.

In code language, the maximum number of letters allowed at the charge for a single word is 10. Words or expressions of more than 10 letters in length, when used in a code sense, are not accepted otherwise than as cypher at 5 letters per word.

Cypher groups are charged for at the rate of 5 letters or figures to the word, any excess being charged for at the rate of 5 letters or figures to a word.

The signature (when it is to be transmitted) is counted in accordance with the rules for counting plain language.

It should be noted that "ch," which counts as one letter in plain language and in code consisting of real words, counts as two letters in artificial code words and in cypher.

Signs of Punctuation, &c.

34. Dashes which only serve to separate the different words or groups of a radiotelegram on the form should neither be transmitted nor counted. Signs of punctuation, apostrophes, and hyphens (except when used in the formation of numbers, commercial marks, &c.—*see* Section 36) are only transmitted if the sender makes a special request for their transmission. If the sender makes no remark, it is assumed that he does not wish them to be transmitted. When they are to be transmitted, the sender must pay for them as isolated characters (*see* Section 35).

If a word or passage is underlined, an extra word should be counted for the underline.

The two signs of a parenthesis ( ) are to be counted as one word; also the two signs of a quotation mark " " or ' '.

Isolated Characters.

35. Every isolated character (letter or figure) is to be counted as one word.

Groups of Characters.

36. Groups of letters forming commercial marks or expressions (as *cif*), groups of letters in current use (as *gwr*, *rsvp*,

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mrcs), and groups of figures should be counted at the rate of five letters or five figures to a word, and at the same rate for any excess. Full stops, hyphens, or dashes, and bars of division used in the formation of fractional or other numbers, or in commercial marks and similar expressions, are each counted as a figure or letter in the group in which they occur. So also is each letter added to a group of figures in order to form an ordinal number or to represent the number of a house (*e.g.*, 386th, 27ten, 42me, 106A, 15bis). Letters and figures may also be combined in one group in commercial marks. Otherwise letters must be counted separately from figures.

Groups of letters must not be accepted in the address. All letters other than those forming names or words must, in the address, be separated, and paid for as one word each. They are then transmitted as separate words.

An exception to this rule will occur in the case of the call-signals of ships having the same name. In such cases the call-signal will be shown in the International List as part of the name, and the whole expression will count as one word.

Combinations, &c.

37. Words incorrectly spelled, so as to reduce the number of letters below the maximum, or incorrectly joined together, contrary to the usage of the language, are inadmissible.

Compound Words.

38. Ordinary compound words and names of towns, countries, provinces, places, and ships (when not already admissible, *in the address only*, as single words under Section 32, whatever the number of words or letters employed to express them), and family names, are to be counted as single words, subject to the limits specified in Sections 33 and 39, provided that they are written without break or hyphen. But if joined by a hyphen, or separated by an apostrophe, such compound words or names must be counted as so many separate words, and the hyphen or apostrophe, if transmitted, will be chargeable as an additional word (*see* Section 34).

The *name* of a street, place, square, &c., if written without a break, is to be counted as one word, subject to the limit of 15 letters to a word; but the word "street," "place," "square," "rue," "boulevard," &c., is to be counted as a separate word for purposes of charge. In Dutch and German, however, the generic word (straat, strasse, platz, &c.) may be joined to the name of the street, place, square, &c., and is not then chargeable as a separate word.

Compound numbers written in words and without break (*e.g.*, ninetysix) should also be counted as single words, subject to the limits specified in Sections 33 and 39.

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Mixed Language.

39. In radiotelegrams partly in plain language and partly in code, the plain language words in the text must be charged for at the rate of 10 letters to a word, any excess being charged for at the rate of 10 letters to a word.

Cypher groups inserted in such messages are to be counted at 5 signs (letters or figures) to a word.

When a mixed radiotelegram consists of plain language and cypher groups only, the plain language should be counted at 15 signs (letters or figures) and the cypher at 5 signs (letters or figures) to a word.

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40.— Examples.

Word, &c.	No. of Characters.	No. of Words counted		Section.
		In the Address.	In the Text.†	
New York	—	1	2	32
Newyork	—	1	1	
Albury New South Wales	—	1	4	
Old Bond St.	—	3	3	
Oldbond St.	—	2	2	
Oldbondstreet	—	2	2	
Van de Brande	—	3	3	
Vandebrande	—	1	1	
Kronprinzessin Cecilie DKA	—	1	3	
Kronprinzessincecilie (21 letters)	—	—	2	
13½*	5	1	1	36
133½*	6	2	2	
137th	5	1	1	
1374th	6	2	2	
106A [number of house]	4	1	1	
ch 23 [commercial mark]	4	—	1	
46·231	6	—	2	
391·12	6	—	2	
29* 31	5	—	1	
Incontrovertibility	19	—	2	33
Sextyzlargs [cypher]	11	—	3	
cwmvld [cypher]	6	—	2	
398499 [cypher]				
(no doubt)	—	—	3	34
"no doubt"	—	—	3	
'no doubt'				
totally [underlined]	—	—	2	
incontrovertibly [underlined]	16	—	3	
form b	—	—	2	35
allright, alright	—	—	2	37
Eggspoon	—	—	1	38
chefdoeuvre	—	—	1	

* These expressions can only be signalled in the form 13⅓, 133⅓, 29/31

† Of plain language telegrams. In messages wholly or partly in code, ten letters to a word.

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III.—SPECIAL RADIOTELEGRAMS.

Sender's Instructions.

41.—(*a*) The sender must write on the form, immediately before the address, any instructions relative to delivery, prepayment of reply, repetition, &c. These instructions may be expressed in abbreviated form as follows:—

Radiotelegram with reply prepaid	RP—*
Radiotelegram to be repeated	TC
Radiotelegram to be delivered by post	Poste
Radiotelegram to be posted as a registered letter	PR
Radiotelegram for express delivery when the cost of delivery is to be collected from addressee	Exprès
Radiotelegram for express delivery in the country of the coast station, when the cost of delivery is prepaid	XP—*
Radiotelegram not to be delivered during the night time	Jour
Radiotelegram to be delivered during the night time if received then	Nuit
Radiotelegram to be called for at a Telegraph Office	TR
Radiotelegram to be called for at a Post Office	GP
Radiotelegram to be called for at a Post Office (registered)	GPR
Radiotelegram with multiple addresses	TM—†
All addresses of a multiple address radiotelegram to be communicated to the addressee	CTA
Radiotelegram of which the receipt is to be acknowledged by the coast station—	
(i) By telegraph	PC
(ii) By post	PCP
Radiotelegram to be given priority over the ordinary telegraph system	D

(*b*) These authorised abbreviations are chargeable as one word each. They should be placed between hyphens or dashes, which are used as a sign of separation. The hyphens or dashes are not charged for; but they should be transmitted in the form of the break-sign.

(*c*) If the instructions are expressed otherwise than by the authorised abbreviations, they should be written in French, or, in the case of radiotelegrams for English-speaking countries or British ships in English, and are chargeable according to the number of words used; but the attention of the sender

* Amount prepaid to be inserted here, *e.g.*, "15/6" or "fr. 18.60."

† Here insert number of addresses.

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should in that case be called to the fact that the abbreviation may be used.

(*d*) In the case of multiple address radiotelegrams instructions of this kind should be written in front of each address to which they apply; but by way of exception instructions for repetition—TC—need precede the first address only.

Prepaid Replies.

42.—(*a*) The sender of a radiotelegram may prepay a reply of any length.

The instruction RP followed by mention of the amount prepaid must be entered in the service instructions and telegraphed, as well as before the address. The amount prepaid should be expressed in sterling currency (*e.g.*, 15/6) if the radiotelegram is exchanged between two British ships or between a British ship and the United Kingdom; in other cases the amount prepaid should be shown in franc currency, thus—fr. 18.60.

If the sender wishes to prepay replies to a multiple radiotelegram he must write RP— before the address of each addressee whose reply he prepays.

(*b*) In the case of a radiotelegram from a ship to a telegraph office on land to which a reply has been prepaid, the reply form issued to the addressee by the delivery office will be accepted at any office of the country of destination in payment or part payment of a foreign telegram or radiotelegram.

(*c*) When a radiotelegram to which a reply has been prepaid is received on board ship, a Reply Form, showing the date of issue, must be filled up and delivered with the radiotelegram. The Reply Voucher issued on board gives the right to send, up to the limit of its value and within the period of six weeks, a radiotelegram from the ship station which issues the voucher to any address whatever. [*S.R.* 38, 1.]

A reply must not be accepted without payment unless a prepaid reply voucher is issued, and if the reply costs more than the amount prepaid, the sender of the reply must pay the balance.

(*d*) Should the addressee of a radiotelegram to which a reply has been prepaid not avail himself of the privilege, the amount paid for the reply will be refunded to the sender, provided that the addressee returns the reply form to the Telegraph Administration of the country in which it was issued, or to the Company controlling the wireless installation on the ship on which it was issued, as the case may be, within three months of the date of its issue, accompanied by a request that the money may be refunded to the sender.

If the reply is not of the value of the amount prepaid, the balance of the charges will be refunded to the sender, on

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application within three months of the date of the issue of the reply form, provided that it is not less than 10*d.* in amount. When the original radiotelegram has not been delivered, the amount deposited for the reply will be refunded after six weeks to the sender or earlier should he make application.

Radiotelegrams to be repeated.

43. The sender of a radiotelegram may have it repeated at each station or office during transmission by paying in addition to the ordinary charge a quarter as much again.

The stations and offices transmitting a "repeated" telegram must repeat it as each in turn receives it, but no copy of the repetition is to be handed to the sender.

The instruction TC, indicating repetition, must be charged for as one word. It must be written between hyphens before the address, and must also be inserted in the service instructions and telegraphed.

Radiotelegrams from Ships to Places on Land to be delivered by special means.

44.—(*a*) The sender must give instructions how radiotelegrams for places not to be found in the International List of Telegraph Offices (or its Annexes) and radiotelegrams to be delivered by special means beyond the free delivery of the terminal telegraph office, are to be forwarded from that office.

(*b*) He should write these instructions, which must be charged for, before the addressee's name.

(*c*) The sender may have his radiotelegram posted to destination from a telegraph office. If it is to be forwarded by post from one place to another in the same country no fee is charged for postage; if it is to be posted in one country for delivery in another country, a charge of 2½*d.* should be collected from the sender for postage in addition to the charge for transmission to the place at which it is to be posted. In either case the word "Poste," which is counted and charged for as a word, should be inserted before the address. For example, the address of a radiotelegram to be forwarded by post from Hamburg should be worded in the following manner:—

"—Poste—Schmidt Wansbeck Hamburg."

The name of the terminal telegraph office should always be written last in the address.

Radiotelegrams can also be posted as registered letters. In this case the words "Poste recommandée" (standing for "Post registered") or the abbreviation PR between hyphens must be inserted before the address, and paid for by the sender. A charge of 2½*d.* for registration fee, in addition to the charge (if any) for postage, must be prepaid on such radiotelegrams.

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(*d*) If a quicker means than the post is to be used the porterage is, as a rule, to be recovered from the addressee, and the address must then be worded as in the following example :— "—Exprès— (meaning "porterage") Schmidt Wansbeck Hamburg." The word "Exprès" (porterage) is counted and charged for.

The sender may, if he desires, prepay the cost of such delivery when the place of destination is situated in the same country as the coast station through which the message is transmitted. [*S.R.* 38, 3.] If the amount is known, the instruction XP—* should be inserted between hyphens before the address and charged for. In some cases the amount charged for porterage is shown in francs and centimes in the International List of Telegraph Offices after the name of the office.

Radiotelegrams to be called for.

45. Radiotelegrams from ships, when intended to be left until called for at telegraph offices or post offices, should bear the words "Télégraphe Restant," "Poste Restante," or "Poste Restante recommandée," as the case may be, either in the address or before it; or the abbreviations, TR, GP, or GPR, respectively, may be used to represent these expressions. In that case they should be written just before the addressee's name. These abbreviated forms count as one word each.

Multiple Addresses.

46.—(*a*) Radiotelegrams from ships (except those for transmission to or viâ North America) may also be addressed to several persons in the same town, or to the same person in different parts of the same town, in which case the indication TM . . . . (the number of addresses being inserted in place of the dots) must be inserted before the name of the first addressee. This indication counts as one word at the full rate per word, and a copying fee of 5*d.* for each additional copy beyond the first must be paid—in addition, of course, to the ordinary charge for the radiotelegram.

(*b*) If the sender desires that all addresses should appear on any or all of the copies to be delivered to the addressees, he must write the instruction "CTA" (meaning "communicate all addresses") before each of the addresses to which this instruction is intended to apply. This indication is charged for as one word each time it is used.

Multiple address radiotelegrams may also be sent to ships under similar conditions.

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* The amount paid should be inserted in the blank space, the whole expression, for example —XP 2/6—, counting as a single word.

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Urgent Radiotelegrams.

47. The sender of a radiotelegram to any European country (except the United Kingdom) or most extra-European countries (except North America and South Africa) may secure for it priority of transmission over the ordinary telegraph system, but not viâ either British, North American, or South African coast stations. The charge, in addition to the coast and ship station rates, is three times the amount of the ordinary telegraphic charge.

In such cases the indication D should be inserted before the address and charged for as one word.

So far as the wireless transmission is concerned, such radiotelegrams receive no priority of treatment. [*S.R.* 38. 8.]

Retransmission.

48. Radiotelegrams may be exchanged between ships and coast stations beyond their range by the aid of intervening ships, or between two ships which are out of range of each other by the aid of intervening ships or coast stations. [*S.R.* 17.]

The number of such retransmissions is limited to two. [*S.R.* 47.]

In the case of radiotelegrams addressed to places on land, use may only be made of retransmission to reach the nearest coast station. [*S.R.* 47.]

Radiotelegrams for Delivery by Post from a Port of Call of the Ship to which they are transmitted.

49. Radiotelegrams may be accepted for a ship with the object of being forwarded by post from a port of call. Retransmission by radiotelegraphy is not permitted in such cases. [*S.R.* 39.]

The address must be drawn up as follows:—

(*a*) The paid instruction "Poste," followed by the name of the port where the radiotelegram is to be posted.

(*b*) Name and address of the addressee.

(*c*) Name of the ship station which is to carry out the posting.

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(*d*) Name of the coast station in communication with the ship, unless the message is exchanged directly between two ships.

Example:—

" =Poste Buenosaires= Smith 14 Calle Prat Valparaiso Avon Lizard."

A charge of 2½*d.* for postage should be collected in addition to the radiotelegraph charges.

A radiotelegram of this nature received on board a ship must be posted as a paid letter at the port indicated, and particulars of posting noted on the duplicate form, which must be prepared and disposed of in the same way as those relating to radiotelegrams delivered on a ship.

Correction of or Inquiry concerning Radiotelegrams.

50.—(*a*) The sender of a radiotelegram to or from a ship may cause instructions to be given respecting it by radiotelegraph. The receiver of a radiotelegram from a ship addressed to an office on land may cause inquiry respecting it to be made of the coast station by telegraph or may obtain repetition of it by telegraph from the coast station.

(*b*) Every message exchanged between two offices at the request of the sender or addressee (or an authorised representative of either) is to be regarded as a paid service message, and to be prefixed ST.

(*c*) For paid service messages correcting a radiotelegram previously transmitted from a ship the sender must pay the cost of a radiotelegram conveying the instructions.

Such paid service messages are charged for as ordinary radiotelegrams except that the name of the ship or office of destination and the name of the ship of origin (which is used as the name of the sender) are not charged for.

(*d*) Corrections should be drawn up as follows:—

(1) Correction of Text.

Form to be used when the sender of a radiotelegram from a ship discovers that he has made an error in the original radiotelegram—

ST Dewsbury Mauretania
2 fifteenth Smith replace third 20 by 2,000
(chargeable as eight words).

In this example "2" denotes the number of the original radiotelegram, "fifteenth" the date, "Smith" the name of the addressee, and "third" the position in the text of the original

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message of the word which the sender desires to correct, and similarly in the other examples which follow.

(2) Correction of Address.

Form to be used when the sender wishes to correct or complete the address of a radiotelegram from a ship which has failed to be delivered—

ST Dewsbury Mauretania
2 fifteenth Smith deliver 36 York Street
(chargeable as seven words).

Service advices relative to a message previously transmitted must be forwarded as far as practicable through the offices and stations by which the original message was transmitted.

Cancelling Radiotelegrams.

51.—(*a*) Though transmission of a radiotelegram has been completed to the next office or station, an attempt may be made at the request of the sender to stop the message before it reaches the addressee at the cost of a paid service message. The form to be used is as follows :—

ST Dewsbury Mauretania
2 fifteenth Smith cancel
(chargeable as four words).

(*b*) If the original radiotelegram has been delivered before the cancelling service message reaches the office or ship of destination, the addressee is, in the ordinary course, informed of the arrival of the cancelling message. If the sender does not wish the addressee to be thus informed, he must pay for the addition of the words "not inform addressee" to the service message.

(*c*) If the sender desires to be informed by telegraph whether his request to cancel a radiotelegram has been complied with, he must pay in addition for a reply of three words, and the instruction RP—* must be signalled as part of the cancelling message. In the latter case the indication RP—*is charged for as one word.

The reply takes the following form :—

ST Mauretania Dewsbury
Smith cancelled
or
Smith already delivered.

(*d*) If he does not desire to be informed by telegraph, he must prepay a sum of 2½*d.* for postage, and the office which

* Here insert amount prepaid for reply.

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cancels the radiotelegram informs, if possible, the office or ship of origin by means of a paid letter of the result of the steps taken.

The reply takes the following form :—

ST Mauretania, Dewsbury
Smith cancelled
or
Smith already delivered.

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IV.—CHARGES, ACCOUNTS, AND REIMBURSEMENTS.

Charge for Radiotelegrams.

52. The charge for a radiotelegram must in every case be prepaid by the sender. For a radiotelegram exchanged between a ship and a telegraph office on land the charge comprises—

(*a*) the ship-station charge;
(*b*) the coast-station charge;
(*c*) the charge for ordinary telegraph transmission;
(*d*) the special charges, if any, mentioned in Part III. of this Handbook;
(*e*) the charge for retransmissions, if any, one ship-station charge for each retransmitting ship [*S.R.* 17. 5].

In the case of a radiotelegram exchanged between two ships the charge consists of—

(i) Viâ Coast Stations.

(*a*) the ship-station charge of the ship of origin;
(*b*) *one* coast-station charge for each coast station;
(*c*) the ship-station charge for the ship of destination;
(*d*) the charge for ordinary telegraph transmission, if any;
(*e*) the special charges, if any, mentioned in Part III. of this Handbook;
(*f*) the charge for retransmissions, if any, one ship-station charge for each retransmitting ship.

Note.—In cases where one coast station only is employed in the transmission and the rates applicable to communications exchanged with the ships concerned are different, the higher coast-station charge must be applied. [*S.R.* 17. 6.]

(ii) Not Viâ Coast Stations.

The same charges as above will apply except (*b*) and (*d*).

Coast-Station and Ship-Station Charges.

53. The coast-station charge and the ship-station charge can be ascertained from the Official List of Stations published by the International Bureau at Berne.

Charges for ordinary Telegraph Transmission.

54. In any case where the ship operator has not the means of calculating the charge for transmission between the coast

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station and the office of destination, or between two coast stations, he should apply to the coast station for information (*see* Appendix III.). [*S.R.* 19. 1.]

The tariffs of foreign countries may be turned into British money by the aid of the second of the tables in the Post Office Guide annexed to the section showing the countries in which Foreign and Colonial Money Orders are issued and paid.

Receipts.

55. A receipt for the charges prepaid may be given, and an additional fee, not exceeding 1*d.*, may be charged for the receipt.

Accounts.

56. The mode of accounting for charges will be arranged between the Postmaster-General and the licensee or the company operating each coast or ship station licensed by him.

Conditions under which Reimbursement may be claimed.

57. The charges for radiotelegrams incorrectly transmitted, unduly delayed, or not delivered to the addressee, will be refunded, wholly or in part, under certain conditions. The following are the principal cases in which reimbursement may be claimed :—

(*a*) When a radiotelegram written in plain language has been rendered useless by inaccurate transmission, the whole amount paid will be refunded. Under no circumstances is the charge for a code or cypher radiotelegram returned on account of an error in transmission (except in the case of collated telegrams) unless such error leads to non-delivery or delay beyond the limits mentioned in (*d*).

(*b*) When a radiotelegram has failed to reach its destination through some error on the part of the telegraphic or radiotelegraphic service, the whole of the amount paid will be refunded.

(*c*) When one or more words have been omitted in transmission, the cost of such word or words will be refunded, provided that it is not less than 10*d.*

(*d*) When a radiotelegram is delayed through the fault of the telegraph service, the whole of the charge will be refunded if the delay reaches a certain limit. The limit is 12 hours in the case of certain countries in Europe; 24 hours in the case of other countries in Europe, and Algeria, Tunis, the Caucasus and

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Turkey in Asia; and 72 hours in the case of other countries. The time occupied in wireless transmission, and the time during which the radiotelegram remains at the coast station in the case of radiotelegrams to ships, or at the ship station in the case of radio-telegrams from ships will not be reckoned towards the period of delay entitling the sender to reimbursement.

(*e*) When a reply paid voucher has not been used and has been returned within three months of the date of issue, or when the full amount deposited for a reply has not been expended, provided that the unexpended amount is not less than 10*d*., and that application is made within three months of the date of issue, the amount due will be refunded to the sender of the original radiotelegram.

(*f*) When a special paid service has not been rendered, as in the case of a TC telegram not repeated, the charge collected in respect thereof will be refunded.

(*g*) When a radiotelegram has been cancelled at the station or office of origin before transmission to the next station or office has commenced or before such transmission has been completed. If the radiotelegram is cancelled after its transmission to the next station or office but before it has reached the ship or office of destination, any balance of charges will be refunded.

Applications for Reimbursements to be made in writing.

58. The above information is given in order that operators may be in a position to advise senders of radiotelegrams who make inquiries or complaints. But it is not intended that an operator should himself refund the amount prepaid on a radiotelegram, or any part of it, except in cases where an operator on a ship of origin has failed to transmit the radiotelegram.

When a radiotelegram cannot be transmitted to the ship of destination, the amount paid for the wireless transmission will be refunded without application. [*S.R.* 41. 1.] In all other cases applicants for the return of money should be told to apply in writing to the company responsible for the ship station. They should also be informed that claims for reimbursement should always be accompanied by documentary evidence, viz.:—

In the case of non-delivery or delay, by a written statement from the office of destination or the addressee that the radiotelegram has not been received, or has been delayed.

In the case of error in a plain-language radiotelegram, or in the case of the omission of one or more words, by the actual message form delivered to the addressee.

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No claim for reimbursement will be entertained unless it is made within five months of the date of the original radiotelegram.

No Reimbursement for consequential and correcting Telegrams.

59. The amounts paid in respect of radiotelegrams or ordinary telegrams sent in consequence of the non-delivery, delay, or incorrect transmission of a radiotelegram will in no case be returned.

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V.—PROCEDURE TO BE OBSERVED BY SHIP AND COAST STATIONS IN THE TRANSMISSION OF RADIOTELEGRAMS.

Priority of Messages.

60. In the transmission of radiotelegrams, priority must be assigned, first of all, to messages of distress (*see* Section 87); then to messages of the British Admiralty and other British Government Departments and to the messages of other Governments (*see* Section 88).

As between the two communicating stations themselves, the following order should be maintained :—

1. Messages relating to navigation.
2. Service messages relating to the conduct of the radiotelegraphic service, or to previous radiotelegrams transmitted by the station concerned.
3. Ordinary correspondence.

Radiotelegrams of the same rank must be transmitted (according to their time of handing in) between two stations, either singly in alternate order, or, if preferable, in series consisting of several messages, *as may be determined by the coast station* (*see* Section 71), provided that the time occupied in the transmission of any one series does not exceed 15 minutes.

Local Numbering of Radiotelegrams.

61. A British coast station communicating with any ship, British or foreign, should give a local number to all the radiotelegrams that it has to transmit, whether Government, service or ordinary, in sequence, beginning with 1. The order of the radiotelegrams will be determined by their priority in accordance with Section 60. There will be a fresh sequence for each ship. Thus, if Niton transmits 20 radiotelegrams to one ship, and subsequently 15 to another ship, the first series will be numbered 1–20, and the second 1–15. This arrangement facilitates the check on transmission provided for in Section 84; and the numbers in the series will be used to designate the respective radiotelegrams in any subsequent service correspondence between the coast station and the ship (Appendix IV.).

Similarly, a British ship communicating with a British coast station will number all the radiotelegrams that it has to transmit in sequence, beginning from 1, in accordance with their priority as determined by Section 60. The

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numbering will commence afresh with each coast station. The procedure corresponds to that laid down for the coast station in the preceding paragraph.

A British ship communicating with a *foreign* coast station should similarly number its radiotelegrams in sequence from 1 onwards. But radiotelegrams received by British ships from foreign coast stations will probably be numbered differently, each one bearing an *international* number, allotted to it *on the ordinary telegraph system*, and used as its distinguishing number in service correspondence between the telegraph offices through which it has passed. In such a case this international number will take the place of the *local* check number described above; it will be entered on the ship form, and will be quoted in any subsequent service message dealing with the radiotelegram so numbered.

Certain foreign ships, when communicating with British coast stations, will probably allot *international* numbers to their radiotelegrams instead of numbering each batch afresh from 1 onwards. In such a case these numbers will be used for purposes of check on transmission and in service correspondence between the coast station and the ship. But they should not be sent on by the coast station over the ordinary telegraph system. A radiotelegram received from a ship with an international number will be treated exactly like one with a local check number, *i.e.*, the number will be suppressed at the coast station.

International Morse Code to be used.

62. The signals used are those of the International Morse Code (*see* Appendix II.). [*S.R.* 20.]

A list of abbreviations indicating phrases in common use in wireless working (with the relative phrases in English) is printed in Appendix III. These must be used in giving or asking for information concerning the radiotelegraph service. [*S.R.* 22.]

General Rules as to Calling.

63. As a general rule, it is the ship station which calls the coast station. [*S.R.* 24. 1.]

In waters where the traffic is congested (the English Channel, &c.) the call must be made, as a general rule, when the coast station is within the normal range of the ship. If this distance is greater than 75 per cent. of the coast station's normal range the ship station must wait until it approaches within that distance of the coast station. [*S.R.* 24. 2.]

64. Before beginning to call, the operator must adjust his receiving apparatus to the highest possible degree of sensitiveness, and make sure that the station which he wishes to call is not engaged in communication. If he finds that transmission

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is taking place, he must wait for the first break before calling, unless he has ascertained that his working will not interfere with the communication in progress. Operators cannot be too careful in carrying out this regulation, as by calling up a station which is already engaged in transmission or while other stations are working they are liable to interfere with the communication that is taking place, causing delay to the stations already engaged, and therefore eventually delaying their own messages. [*S.R.* 24. 3.]

Wave-Length to be used when calling another Station.

65. A station, for calling purposes, uses the normal wave-length of the station with which it desires to communicate. In the case of coast stations using more than one wave, the normal wave-length is underlined in the Official List. [*S.R.* 24. 4.]

Controlling Station.

Calling to be discontinued on request from Coast Station.

66. If, in spite of these precautions, the exchange of public traffic is interfered with, the call must cease at the first request made by a coast station open for public service. This station must then indicate, approximately, how long it will be necessary to wait. [*S.R.* 24. 5.] *See also* Section 72.

In this connection operators should carefully note that the main principle governing all communications between a ship station and a coast station is essentially that the coast station is the controlling station, except in the case of distress messages. (*See* also Section 90.)

Leaving the Instruments unattended.

67. In order to avoid the continued and unnecessary calling of a station whose operators do not keep a permanent watch, such a station must intimate to the stations with which it is in communication, if at any time it is proposed to leave the instruments unattended and the period for which they will remain unattended.

Procedure for Coast Stations receiving more than One Call.

68. When a coast station receives calls from several ship stations, the coast station decides the order in which the ship stations shall be allowed to transmit their correspondence.

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The sole consideration which must govern the coast station in settling this order is the necessity of allowing every station concerned to exchange the greatest possible number of messages. Preference should therefore be given to a ship whose position, course, and speed indicate that she will be the first to pass out of range.

Call and Reply and use of C Q Signal.

69. The call comprises the signal* — · — · — once: the call-signal of the station called repeated thrice: the word "de" once: and the call-signal of the calling station repeated thrice.

The station called answers by giving the signal — · — · — once, followed by the call-signal of the calling station repeated thrice, by the word "de" once, by its own call-signal once, and by the signal — · — (Go) once.

Stations which wish to enter into communications with ship stations which may be within range, but whose call-signals or names are unknown, may make use of the call-signal C Q (— · — · — — — · —).

Example of Call.

Thus, suppose a ship, whose call-signal is A B C, wishes to communicate with a station whose call-signal is X Y Z; after first having ascertained that the station is not communicating, the ship station will signal:—

— · — · — X Y Z X Y Z X Y Z — · · · (de)
A B C A B C A B C

and the called station will reply thus:—

Example of Reply.

— · — · — A B C A B C A B C — · · ·
X Y Z — · —

Information when Call has been made.

70. If the call is from a ship station to a coast station, the the ship station will then make known† :—

(*a*) The approximate distance, in nautical miles, of the ship from the coast station;
(*b*) The position of the ship, in a convenient form;
(*c*) The next port of call;

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* For explanation of the signals in this and the following Sections, *see* Appendix II.

† The information under headings (*a*), (*b*), (*c*), and (*e*) should not be given by the operator on his own responsibility, but should be obtained from the Bridge.

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(*d*) The number of telegrams she has to transmit, or the number of words if any of the messages are of abnormal length;

(*e*) The speed of the ship, if specially demanded by the coast station. [*S. R.* 28. 1.]

The prefix TR should be used for this preliminary correspondence.

Example of TR :—

— · — · — T R X Y Z — — · · — (de) A B C 70 off Start Newyork 5 (number of Radiotelegrams) *or* 300 (number of words) · — · — ·.

Reply of Station which has been called.

71. The coast station will then acknowledge the receipt of the TR and indicate the number of words or telegrams (as in (*d*) above) which it has to transmit to the ship, and will say whether it is ready to communicate at once, or whether the ship is required to wait. (For the procedure in the latter event, *see* Section 72.)

If the coast station is ready to communicate at once, it will decide whether transmission is to take place in alternate order or in series (*see* Section 60), and whether the ship or the coast station is to transmit first, and will give the necessary instructions to the ship. Thus the reply of the coast station (X Y Z) to the ship (A B C) after receiving the particulars set forth in Section 70 may take one of the four following forms:

i. — · — · — ABC — — · · — XYZ R TR 50 *series 5 — · — · — (*i.e.*, "Received TR, I have radiotele-" grams containing 50 words for you. Transmission will take " place in series of 5 messages each." The ship will acknowledge the receipt of these instructions, and the coast station will then transmit five messages, provided that their transmission does not occupy more than fifteen minutes (Section 60)).

ii. — · — · — ABC — — · · — XYZ R TR 50 *series 5 — · — (*i.e.*, "Received TR, I have radiotelegrams " containing 50 words for you. Transmission will take place " in series of 5 messages each. You begin." The ship will then transmit five messages, subject, as above, to the limit of 15 minutes).

iii. — · — · — ABC — — · · — XYZ R TR 50 †alternate — · — · — (*i.e.*, "Received TR, I have radiotele-" grams containing 50 words for you. Transmission will take " place in alternate order." The ship will acknowledge the

---

* The symbol Q S G may be used instead of "series 5" and Q S H for "series 10" (*see* Appendix III.). It rests with the coast station to determine the number of messages in each series.

† The symbol Q S F may be used instead of "alternate" (*see* Appendix III.).

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receipt of these instructions, and the coast station will then transmit its first message).

iv. — · — · — ABC — · · · XYZ R TR 50 alternate — · — (*i.e.*, "Received TR, I have radiotelegrams "containing 50 words for you. Transmission will take place "in alternate order. You begin." The ship will then transmit its first message).

In the case of exchanges between two ship stations it rests with the station called to fix the order of transmission. [*S.R.* 28. 5.]

Procedure when the Ship is required to Wait.

72. If the coast station is not ready to communicate at once after receiving the particulars set forth in Section 70, it will instruct the ship to wait (say) 20 minutes, thus : — · — · — ABC — · · · XYZ R TR 50 · — · · · · · — · — · — · — · (*i.e.*, "I have radiotelegrams containing 50 words to "transmit to you. Wait 20 minutes"). The ship station must then "stand by" until the specified time has elapsed; but it must be ready to communicate, if necessary, before the end of that time.

When the coast station is ready to communicate, it will call the ship (using the form of call laid down in Section 69), and the ship will reply (using the form of reply laid down in Section 69). The procedure will then be as in Section 71.

If the ship, when called, is not ready to communicate it will request the coast station to wait, stating the approximate length of the wait. [*S.R.* 28. 4.]

Failure to Reply.

73. If a station called does not reply as the result of a call thrice repeated at intervals of two minutes, the call can only be renewed after an interval of 15 minutes, the station making the call having first ascertained that no radiotelegraphic communication is in progress. [*S.R.* 26.] (This rule does not apply in cases of distress. *See* Section 87.)

Transmission of Radiotelegrams.

74. As regards the radiotelegram to be transmitted :—

The transmission of a radiotelegram is preceded by the signal — · — · — and terminated by the signal · — · — ·, followed by the call-signal of the transmitting station and the signal — · —. In the case of a series of radiotelegrams the call-signal of the sending station and the signal — · — must only be given at the end of the series. [*S.R.* 31.]

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When the radiotelegram to be transmitted contains more than 40 words, the transmitting station interrupts transmission after each series of about 20 words with a mark of interrogation ▪ ▪ ▬ ▬ ▪ ▪, and only continues transmission after having obtained from the receiving station the repetition of the last word duly received, followed by the signal to Go (▬ ▪ ▬).

In the case of transmission by series, an acknowledgment of receipt is given after each radiotelegram.

Coast stations engaged in transmitting long radiotelegrams must suspend transmission at the end of each period of 15 minutes, and must remain silent for three minutes before continuing transmission.

Coast and ship stations which work under conditions laid down in Section 18 must suspend work at the end of each period of 15 minutes and keep watch on the wave length of 600 metres for three minutes before continuing transmission. [*S.R.* 32.]

Preamble to Radiotelegram.

75. In all radiotelegrams, whether to or from ships, the prefix, if any, comes first (*i.e.*, immediately after the commencing sign ▬ ▪ ▬ ▪ ▬). The only prefixes used for radiotelegrams are "S" for Government message, "A" for service message, "ST" for paid service message, "Presse" for press message, and "D" for urgent radiotelegrams.

Next follow the word "Radio"; the name of the ship of origin, or the office of origin (in the case of a radiotelegram originating at an office on land); the number of the radiotelegram (*see* Section 61); the number of words; the date and time of handing in; and any service instructions, such as route indication, &c.*

All the particulars mentioned above (which constitute the preamble) are transmitted free of charge.

After the preamble (but not as part of it), and before the address, come the supplementary instructions, if any (*see* Part III.). These are counted in the number of words, and charged for.

Preamble for Inland Transmission from Coast Station.

76. On transmitting a radiotelegram from a ship over the ordinary telegraph system, the coast station inserts for office of origin the name of the ship of origin as it appears in the Official List, and also, when the case arises, the name of the last ship which acted as intermediary (should any retransmission

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* *See also* Section 89 in the case of doubtful reception.

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have occurred) and the name of the coast station. The code time (*i.e.*, the time of receipt of the radiotelegram at the coast station) should also be inserted, and this, together with the service instructions, the date and time of handing in, and the number of words signalled by the ship, should be transmitted in the order shown in Section 80.

Break Sign.

77. The Break sign (▬ ▪ ▪ ▪ ▬) is used to separate the preamble from the supplementary instructions, the supplementary instructions from each other, the supplementary instructions from the address, the different addresses of a multiple telegram from each other, the address from the text, and the text from the signature.

Example of Radiotelegram from Coast Station to Ship.

78. Thus the form of a radiotelegram from a coast station to a ship will be as follows :—

Commencing sign—Prefix (if any)—Radio—Name of office of origin—*Number of the radiotelegram—Number of words—Date and time of handing in—Service instructions—Break sign—Supplementary instructions, if any—Break sign—Address—Break sign—Text of message—Break sign—Signature—Finish sign—Call-signal of sending station—*e.g.* :—

▬ ▪ ▬ ▪ ▬ Radio—Calcutta 4 6 12 9.35 m
(twelfth day of the month, 9.35 a.m.)
▬ ▪ ▪ ▪ ▬ Jones Campania Lizard ▬ ▪ ▪ ▪ ▬ await news
▬ ▪ ▪ ▪ ▬ Brown ▪ ▬ ▪ ▬ ▪ M L D.

Example of Radiotelegram from Ship to Coast Station.

79. The form of a radiotelegram from a ship to a coast station will be as follows :—

Commencing sign—Prefix (if any)—Radio—Name of ship of origin —*Number of the radiotelegram—Number of words—Date and time of handing in—Service instructions—Break sign—Supplementary instructions, if any—Break sign—Address—Break sign—Text of message—Break sign—Signature—Finish sign—Call-signal of sending station—*e.g.* :—

▬ ▪ ▬ ▪ ▬ Radio—Carmania 5 8 12 9.35 m ▬ ▪ ▪ ▪ ▬
(twelfth day of the month, 9.35 a.m.)
Brown 175 King Street Calcutta ▬ ▪ ▪ ▪ ▬
Arrive tomorrow ▬ ▪ ▪ ▪ ▬ Jones ▪ ▬ ▪ ▬ ▪ M C A

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* That is, the number for purposes of check (*see* Section 61).

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Example of Radiotelegrams when signalled over the ordinary Telegraph System.

80. Commencing sign—Prefix—Code time—Radio—Name of ship of origin—Name of last transmitting ship (if any)—Name of coast station—Date and time of handing in—Service instructions—Number of words—Break sign—Supplementary instructions (if any)—Break sign—Address—Break sign—Text of message—Break sign—Signature. Finish sign—*e.g.*:—

▪ ▪ ▪ ▬ ▪ S or X—LF—Radio—Carmania—
(11.30 a.m. or p.m.)

(viâ Saxonia, in case of retransmission)—Niton—12 6.35 a.m.
—9 ▬ ▪ ▪ ▪ ▬ (twelfth day of the month, 6.35 a.m.)

Jones 68 High Street Doncaster ▬ ▪ ▪ ▪ ▬

Meet landing stage ▬ ▪ ▪ ▪ ▬ Smith ▪ ▪ ▪ ▬ ▪

Instructions for Signalling Time.

81. The date and time are signalled by two groups of figures, the first group representing the day of the month and the second group the hour and minutes followed by the letter m for a.m., or s for p.m. (matin or soir). Thus 2.30 p.m. on the 12th day of a month would be signalled:—12 2.30s.

Instructions for Signalling Number of Words.

82. In signalling the number of words, if the actual number of words in the radiotelegram is not the same as the number of words charged for, the number is signalled as a fraction, the numerator indicating the number of words charged for and the denominator the actual number of words.

Thus:— 22 ▬ ▪ ▪ ▬ ▪ 20.

Repetition of Government Radiotelegrams.

83. Government radiotelegrams entirely or partially in code or cypher must be repeated by the receiving station.

In the case of Government radiotelegrams in plain language, proper names, numbers, and doubtful words must be repeated.

Acknowledgment of Receipt of Radiotelegram.

84. In transmission either in alternate order or in series the receipt of a radiotelegram is acknowledged by the letter R (▪ ▬ ▪) followed by the number of the radiotelegram received. Thus:— R 19. [*S.R.* 32.]

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The acknowledgment of receipt should be preceded by the call-signal of the sending station and followed by the call-signal of the receiving station.

As to the course to be adopted in the case of radiotelegrams containing more than 40 words, *see* Section 74.

Use of International Code of Signals.

85. The International Code of Signals (originally prepared for flag signalling) may be used for radiotelegrams.

The call-signal followed by the letters ▪▬▬▪ ▪▬▪ ▬▪▪▪ (P R B) signifies that the ship or the coast station making the call wishes to communicate with the station called by means of this Code of Signals.

The combination of the letters P R B is prohibited, as a service signal, for any other purpose than that above indicated.

Radiotelegrams in this Code which are addressed to a radiotelegraph station for onward transmission are not translated by that station.

Signal for Finish of Correspondence.

86. The end of work between two stations is indicated by each station signalling ▪▪▪▬▪▬ followed by its own call-signal. [*S.R.* 34.]

Distress Signal.

87.—(*a*) Ships in distress make use of the following signal:—

▪▪▪▬▬▬▪▪▪

repeated at short intervals, followed by the necessary particulars.

(*b*) As soon as a station perceives the distress signal, it must suspend all correspondence, and must not resume work until it has made sure that the communication consequent on the call for assistance has been completed. [*S.R.* 21.]

(*c*) When a ship in distress adds, after a series of distress signals, the call-signal of a particular station, the duty of answering the call rests with that station only, unless that station does not reply. A ship in distress has control of wireless communication within its range.

(*d*) Failing any mention of a particular station in the signal of distress, any station which receives the call is bound to answer it. But it must be borne in mind that other stations may also answer; and when this is found to be the case the

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answering stations should co-operate as far as possible to ensure that the reception of signals by the ship in distress is not rendered difficult by simultaneous signalling. When the answering stations become aware of each other's position the duty of rendering assistance will naturally be left to that which is nearest to the ship in distress or which for any other reason is best able to assist. (*See also* Section 60.)

Admiralty Signalling.

88. The signal — • • — • • — • • — will indicate that a British man-of-war is calling a British coast station and has a message for transmission to the Admiralty. On receipt of such a signal, the coast station called must suspend all other communication (except such as may concern a vessel in distress) in order to deal with the message from the man-of-war. Any other stations (ship or coast) must also suspend communication (except such as may concern a vessel in distress) so far as this may be necessary to ensure satisfactory communication between the man-of-war and the station called. (*See also* Section 60.)

Procedure when Signals become doubtful.

89. When signals become doubtful, it is important that recourse should be had to all possible means for effecting transmission. For this purpose the radiotelegram is repeated, *at the request of the receiving station*, but not more than three times. If, in spite of this triple transmission, the signals are still unreadable, the radiotelegram is cancelled. If an acknowledgment of receipt is not received, the transmitting station again calls the receiving station. If no reply is made after three calls, transmission is not continued. In such cases the transmitting station has the right to obtain the acknowledgment of receipt by service message through another radiotelegraphic station, using, when necessary, the lines of the telegraph system.

If the receiving station, in spite of defective reception, thinks that the radiotelegram may be delivered, it acknowledges receipt, inserts the service instruction "Reception doubtful" at the end of the preamble, and sends on the radiotelegram. If the ship station later on transmits the radiotelegram to another coast station of the same administration, the charges for a single transmission only can be claimed. [*S.R.* 33.]

Superfluous Correspondence prohibited between Stations.

90. Coast and ship stations open for public correspondence are prohibited from exchanging superfluous signals and words. Trials and practice are only permitted at these stations in so far as they do not interfere with the service of other stations. [*S.R.* 6.]

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Practice must be carried out with wave-lengths different from those allowed for public correspondence, and with the minimum of power necessary.

The coast station is the controlling station in all cases, except in the case of distress messages. (*See also* Section 66.) Transmissions exchanged between ship stations must be carried out in such a way as not to interfere with the service of coast stations, as the latter must have, as a general rule, right of priority for public correspondence.

Retransmission of Radiotelegrams failing Direct Communication.

91. Coast stations and ship stations are bound to take part in the retransmission of radiotelegrams in cases in which communication cannot be established directly between the stations of origin and destination. (*See also* Section 48 and, for charges, Section 52.)

Retransmission shall be in all cases subject to the condition that the intermediate station which receives the radiotelegram in transit is in a position to send it on. [*S.R.* 47.]

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VI.—DETAILED SERVICE REGULATIONS APPENDED TO THE INTERNATIONAL RADIOTELEGRAPH CONVENTION.

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1. Organisation of Radiotelegraph Stations.

ARTICLE 1.

The choice of radiotelegraph apparatus and devices to be used by coast stations and ship stations is free. The installation of these stations must, as far as possible, be in keeping with scientific and technical progress.

ARTICLE 2.

Two wave-lengths, one of 600 and the other of 300 metres, shall be allowed for the service of general public correspondence. Every coast station open to this service must be equipped in such a way as to be able to use these two wave-lengths, of which one shall be indicated as the normal wave-length of the station. During the whole time that it is open every coast station must be in a condition to receive calls made

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by means of its normal wave-length. Nevertheless, for the correspondence covered by paragraph 2 of article 35, use shall be made of a wave-length of 1,800 metres. Further, each Government may authorise the use, in a coast station, of other wave-lengths for the purpose of securing a long-range service, or a service other than that of general public correspondence, and established in conformity with the provisions of the Convention, with the reservation that these wave-lengths do not exceed 600 metres, or that they do exceed 1,600 metres.

In particular, stations used exclusively for the despatch of signals intended to determine the position of ships must not use wave-lengths exceeding 150 metres.

ARTICLE 3.

1. Every ship station must be equipped in such a way as to be able to use the wave-lengths of 600 metres and of 300 metres. The first shall be the normal wave-length, and may not be exceeded in transmission, the case of article 35 (paragraph 2) excepted.

Use may be made of other wave-lengths not exceeding 600 metres in special cases, and subject to the approval of the administrations to which the coast stations and ship stations concerned are subject.

2. During the whole time that it is open every ship station must be able to receive calls made by means of its normal wave-length.

3. Ships of small tonnage, in the case of which it would be materially impossible to use the wave-length of 600 metres for transmission, may be authorised to employ exclusively the wave-length of 300 metres; they must be able to receive by means of the wave-length of 600 metres.

ARTICLE 4.

Communications between a coast station and a ship station, or between two ship stations, must be exchanged on both sides by means of the same wave-length. If, in a particular case, communication is difficult, the two stations may, by mutual consent, pass from the wave-length by means of which they are communicating to the other regulation wave-length. Both stations shall resume their normal wave-lengths when the radio-telegraphic exchange is finished.

ARTICLE 5.

1. The International Bureau shall draw up, publish, and revise periodically an official map showing the coast stations, their normal ranges, the principal lines of navigation, and the time normally taken by ships for the voyage between the various ports of call.

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2. It shall draw up and publish a Nomenclature of the radiotelegraph stations covered by Article 1 of the Convention, and also periodical supplements for additions and modifications. This Nomenclature shall give in the case of each station the following information :—

(1) For coast stations : The name, nationality, and geographical position indicated by the territorial subdivision and by the longitude and latitude of the place. For ship stations : The name and nationality of the ships ; when the case arises, the name and address of the contractor.

(2) The call signal (the call signals must be differentiated from one another, and each one must consist of a group of three letters).

(3) The normal range.

(4) The radiotelegraphic system, with the characteristics of the system of emission (musical sparks, tonality expressed by the number of double vibrations, &c.).

(5) The wave-lengths used (the normal wave-length to be underlined).

(6) The nature of the services performed.

(7) The hours of working.

(8) When necessary, the hour and method of despatch of time-signals and meteorological telegrams.

(9) The coast or ship charge.

3. There shall also be included in the Nomenclature such information relating to radiotelegraph stations other than those covered by Article 1 of the Convention, as shall be communicated to the International Bureau by the administrations to which such stations are subject, provided that these are either administrations which are parties to the Convention or, if they are not parties to it, have made the declaration provided for in Article 48.

4. The following notations shall be adopted in documents for the use of the international service to designate radiotelegraph stations :—

PG - Station open to general public correspondence.
PR - Station open to restricted public correspondence.
P - Private station.
O - Station open only to official correspondence.
N - Station always open.
X - Station not having fixed working hours.

5. The name of a ship station indicated in the first column of the Nomenclature must be followed, when there is duplication of the name, by the call-signal of such station.

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Article 6.

The exchange of unnecessary signals and words is forbidden to the stations covered by Article 1 of the Convention. Experiments and practice shall not be allowed in these stations except so far as they do not disturb the service of other stations.

Practice must be carried out with wave-lengths different from those allowed for public correspondence, and with the minimum of power necessary.

Article 7.

1. All stations are bound to exchange traffic with the minimum of energy necessary to ensure good communication.

2. Every coast or ship station must satisfy the following conditions:—

(*a*) The waves emitted must be as pure and as little damped as possible.

In particular, the use of transmitting devices in which the production of the waves emitted is obtained by discharging the aerial directly by sparks (plain aerial) shall not be allowed except in cases of distress.

It may, however, be allowed in the case of certain special stations (for example, those of small boats) in which the primary power does not exceed 50 watts.

(*b*) The apparatus must be capable of transmitting and receiving at a speed at least equal to 20 words per minute, the word being reckoned at the rate of five letters.

New installations bringing into play an energy of more than 50 watts shall be equipped in such a way that it may be possible to obtain easily several ranges less than the normal range, the shortest being of approximately 15 nautical miles. Installations already established bringing into play an energy of more than 50 watts shall be transformed as far as possible in such manner as to satisfy the foregoing requirements.

(*c*) Receiving apparatus must allow of receiving, with the greatest possible amount of protection from disturbance, transmissions made with the wave-lengths specified in the present Regulations, up to 600 metres.

3. Stations serving solely for determining the position of ships (radiophares) must not operate over an area of greater radius than 30 nautical miles.

Article 8.

Independently of the general conditions specified in Article 7, ship stations must also satisfy the following conditions:—

(*a*) The power transmitted to the radiotelegraphic apparatus, measured at the terminals of the generator of

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the station, must not, under normal circumstances, exceed 1 kilowatt.

(*b*) Subject to the provisions of Article 35, paragraph 2, a power exceeding 1 kilowatt may be used, if the ship is under the necessity of corresponding at a distance of more than 200 nautical miles from the nearest coast station, or if, in consequence of exceptional circumstances, communication cannot be realised except by means of an increase of power.

ARTICLE 9.

1. No ship station may be established or worked by private enterprise without a licence issued by the Government to which the ship is subject.

Stations on board ships having their port of register in a colony, possession, or protectorate may be described as being subject to the authority of such colony, possession, or protectorate.

2. Every ship station holding a licence issued by one of the contracting Governments must be regarded by the other Governments as having an installation fulfilling the conditions imposed by the present Regulations.

The competent authorities of the countries where the ship calls may demand the production of the licence. In default of such production, these authorities may ascertain whether the radiotelegraph installations of the ship satisfy the conditions imposed by the present Regulations.

When an administration has practical evidence that a ship station is not fulfilling these conditions, it must, in every case, address a complaint to the administration of the country to which the ship is subject. From that point onwards the procedure shall be, when necessary, as provided in Article 12, paragraph 2.

ARTICLE 10.

1. The service of the ship station must be carried out by a telegraphist holding a certificate issued by the Government to which the ship is subject, or, in an emergency and for one voyage only, by another Government party to the Convention.

2. There shall be two classes of certificates.

The first class certificate shall state the professional qualifications of the operator with regard to—

(*a*) The adjustment of the apparatus and knowledge of their working;

(*b*) Transmitting and receiving by ear, at a speed which must not be less than twenty words per minute;

(*c*) Knowledge of the regulations applying to the exchange of radiotelegraphic communications.

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The second class certificate may be issued to a telegraphist who only attains to a speed in transmitting and receiving of twelve to nineteen words per minute, but who fulfils the other conditions mentioned above. Telegraphists holding a second class certificate may be allowed:—

(*a*) On ships which only use radiotelegraphy for their own service and for the correspondence of the ship's company, in particular on fishing vessels;

(*b*) On all ships, as substitutes, provided that such ships have on board at least *one* operator holding a first class certificate. Nevertheless, on ships placed in the first class indicated in Article 13, the service must be carried out by at least two telegraphists holding first class certificates.

In ship stations, transmissions may only be made by a telegraphist holding a first or second class certificate, an exception being made of cases of emergency, in which it would be impossible to conform to this provision.

3. Further, the certificate shall testify that the Government has placed the telegraphist under the obligation of preserving the secrecy of correspondence.

4. The radiotelegraph service of the ship station shall be placed under the supreme authority of the captain of the ship.

Article 11.

Ships provided with radiotelegraph installations and placed in the first two classes indicated in Article 13 shall be bound to have emergency radiotelegraph installations of which all the parts shall be placed in conditions of the greatest safety possible, such conditions to be determined by the Government which issues the licence. These emergency installations must have at command a source of power of their own, must be capable of being set working speedily, must be able to work for six hours at least, and must have a minimum range of 80 nautical miles in the case of ships in the first class and of 50 miles in the case of those of the second class. This emergency installation shall not be required in the case of ships whose ordinary installation fulfils the conditions of the present article.

Article 12.

1. If an administration has information of a breach of the Convention or of the regulations committed in one of the stations which it has authorised, it shall ascertain the facts and fix the responsibility.

In the case of ship stations, if the responsibility rests on the operator, the administration shall take the necessary steps, and, if necessary, shall withdraw the certificate. If it is shown that

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the breach was due to the condition of the apparatus or to instructions given to the telegraphist, the same procedure shall be followed in respect of the licence issued to the ship.

2. In the event of repeated breaches by the same ship, if the representations made to the administration to which the ship is subject, by another administration, remain without effect, the latter shall have the right, after notice given, of authorising its coast stations not to accept communications coming from the ship in question. In case of a difference between the two administrations, the question shall be submitted to arbitration on the request of one of the Governments concerned. The procedure is indicated in Article 18 of the Convention.

2. Hours of Service of Stations.

ARTICLE 13.

(a) *Coast Stations.*

1. The service of coast stations shall be, as far as possible, permanent, day and night, without interruptions.

Nevertheless certain coast stations may have a service of limited duration. Each administration shall fix the hours of service.

2. Coast stations whose service is not permanent may not close before having transmitted all their radiotelegrams to the ships which are within their radius of action nor before having received from such ships all the radiotelegrams of which notice has been given. This provision shall also apply when ships notify their presence before work has actually ceased.

(b) *Ship Stations.*

3. Ship stations shall be placed in three classes:—

(1) Stations always open.
(2) Stations having limited working hours.
(3) Stations having no fixed working hours.

During navigation the following must remain permanently on the watch: (1) ships of the first class; (2) those of the second class, during the hours that they are open for service; out of these hours, the latter stations must remain on the watch for the first ten minutes of each hour. The stations of the third class are not bound to perform any regular "listening" service.

It shall fall to the Governments which issue the licences specified in article 9 to fix the class in which the ship is to be placed in respect of its obligations in the matter of keeping watch. This classification shall be mentioned in the licence.

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3. Drawing up and handing in of Radiotelegrams.

ARTICLE 14.

1. Radiotelegrams shall bear, as the first word of the preamble, the service instruction "radio."

2. In the transmission of radiotelegrams coming from a ship at sea, the date and the hour of handing in at the ship station shall be indicated in the preamble.

3. On forwarding over the telegraph system, the coast station shall insert, as the indication of the office of origin, the name of the ship of origin as it appears in the Nomenclature, and also, when the case arises, that of the last ship which served as an intermediary. These particulars shall be followed by the name of the coast station.

ARTICLE 15.

1. The address of radiotelegrams intended for ships must be as complete as possible. It shall be compulsorily drawn up as follows:—

(*a*) Name or title of the addressee, with supplementary particulars, if necessary.

(*b*) Name of the ship, as it appears in the first column of the Nomenclature.

(*c*) Name of the coast station, as it appears in the Nomenclature.

Nevertheless, the name of the ship may be replaced, at the risks and perils of the sender, by the particulars of the voyage taken by such ship and determined by the names of the ports of origin and destination, or by any other equivalent particulars.

2. In the address the name of the ship, as it appears in the first column of the Nomenclature, shall be counted in every case, and independently of its length, as one word.

3. Radiotelegrams drawn up by means of the International Signal Code shall be forwarded to their destination without being decoded.

4. Charges.

ARTICLE 16.

1. The coast charge and the ship charge shall be fixed in accordance with the tariff per word pure and simple on the basis of a fair remuneration for radiotelegraphic work, with optional application of a minimum charge per radiotelegram.

The coast charge may not exceed 60 centimes per word, nor the ship charge 40 centimes per word. Nevertheless, each administration shall have the right to authorise coast and ship

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charges higher than these maxima in the case of stations having a range of more than 400 nautical miles, or of stations exceptionally onerous on account of the material conditions of their installation or working.

The optional minimum charge per radiotelegram may not exceed the coast or ship charge for a radiotelegram of ten words.

2. In the case of radiotelegrams originating from or intended for a country, and exchanged directly with the coast stations of that country, the charge applying to the transmission over the lines of the telegraph system must not exceed, on the average, that of the inland rate of that country.

This charge shall be reckoned per word pure and simple, with an optional minimum charge not exceeding the charge for ten words. It shall be notified in francs by the administration of the country to which the coast station is subject.

In the case of countries in the European system, with the exception of Russia and Turkey, there shall only be a single charge for the territory of each country.

Article 17.

1. When a radiotelegram originating from a ship and intended for *terra firma* passes through one or two ship stations, the charge shall include, in addition to those of the ship of origin, the coast station, and the telegraph system, the ship charge of each of the ships taking part in the transmission.

2. The sender of a radiotelegram originating from *terra firma* and intended for a ship may require that his message be transmitted by way of one or two ship stations; he shall deposit for this purpose the amount of the radiotelegraphic and telegraphic charges, and besides, as a deposit, a sum to be fixed by the office of origin with a view to the payment to the intermediate ship stations of the transit charges fixed in paragraph 1; he must further pay, as he may choose, either the charge for a telegram of five words or the cost of postage of a letter to be sent by the coast station to the office of origin giving the information necessary for the liquidation of the sum deposited.

The radiotelegram shall then be accepted at the risks and perils of the sender; it shall bear before the address the paid additional particulars: "x retransmissions télégraphe" or "x retransmissions lettre" (x representing the number of retransmissions required by the sender) accordingly as the sender desires that the information necessary for the liquidation of the deposit be furnished by telegram or by letter.

3. The charge for radiotelegams originating from a ship intended for another ship, and sent by way of one or two intermediate coast stations, shall include:—

The ship charges of both ships, the charge of the coast station or the two coast stations, as the case may be, and when

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necessary the telegraph charge appropriate to the transit between the two coast stations.

4. The charge for radiotelegrams exchanged between ships without the aid of a coast station includes the ship charges of the ship of origin and of the ship of destination, with the ship charges of the intermediate stations added thereto.

5. The coast and ship charges due to the stations of transit shall be the same as those fixed for such stations when these are stations of origin and destination. In no case shall they be collected more than once.

6. In the case of any intermediate coast station the charge to be collected for the transit service shall be the highest of the coast charges appertaining to the direct exchange with the two ships in question.

ARTICLE 18.

The country in whose territory is established a coast station acting as intermediary for the exchange of radiotelegrams between a ship station and another country shall be regarded, for the purpose of applying telegraphic charges, as the country of origin or of destination of such radiotelegrams and not as the country of transit.

5. Collection of Charges.

ARTICLE 19.

1. The total charge for radiotelegrams shall be collected from the sender, with the exception—1st, of the cost of express delivery (Article 58, paragraph 1, of the Telegraph Regulations); 2nd, of the charges applying to inadmissible joinings or alterations of words, noted by the office or station of destination (Article 19, paragraph 9, of the Telegraph Regulations), these charges being collected from the addressee.

Ship stations must possess the necessary tariffs for this purpose. They shall have, however, the right to obtain information from coast stations with regard to charges for radiotelegrams for which they do not possess all the necessary information.

2. The counting of words by the office of origin shall be decisive in the case of radiotelegrams addressed to ships, and that of the ship station of origin shall be decisive in the case of radiotelegrams originating in ships, both for the purpose of transmission and for that of the international accounts. Nevertheless, when the radiotelegram is worded wholly or in part either in one of the languages of the country of destination, in the case of radiotelegrams originating in ships, or in one of the languages of the country to which the ship belongs, in the case

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of radiotelegrams addressed to ships, and when the radiotelegram contains joinings or alterations of words contrary to the common use of that language, the office or ship station of destination, as the case may be, shall have the right to recover from the addressee the amount of the charge not collected. In the case of a refusal to pay the radiotelegram may be withheld.

6. Transmission of Radiotelegrams.

(a) *Signals of Transmission.*

ARTICLE 20.

The signals employed shall be those of the International Morse Code.

ARTICLE 21.

Ships in distress shall make use of the following signal :—

• • • ▬ ▬ ▬ • • •

repeated at short intervals, followed by the necessary particulars.

As soon as a station hears a signal of distress, it must suspend all correspondence, and must not resume the same until after it has made sure that the communication consequent upon the call for help is finished.

The stations which hear a call of distress must act according to the indications given by the ship which makes the call, with regard to the order of messages or their cessation.

When, at the end of a series of distress calls, there is added the call-signal of a particular station, the reply to the call is proper to that station only, unless that station does not reply. Failing the indication of a particular station in the call for help, every station that hears the call shall be bound to reply thereto.

ARTICLE 22.

For the purpose of giving or asking information concerning the radiotelegraph service, stations must make use of the signals contained in the list appended to the present Regulations.

(b) *Order of Transmission.*

ARTICLE 23.

Between two stations, radiotelegrams of the same class shall be transmitted singly in alternate order or by series of several radiotelegrams, according to the instructions given by the coast station, on condition that the duration of the transmission of each series do not exceed 15 minutes.

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(c) *Calling of Stations and Transmission of Radiotelegrams.*

ARTICLE 24.

1. As a general rule, it shall be the ship station that calls the coast station, whether it has radiotelegrams to transmit or not.

2. In waters where the radiotelegraphic traffic is congested (the Channel, &c.), the call of a ship to a coast station may not, as a general rule, be made unless the latter is within the normal range of the ship station, and the ship station has approached to a distance less than 75 per cent. of the normal range of the coast station.

3. Before proceeding to make a call, the coast station or the ship station must adjust its receiving system to the highest possible degree of sensitiveness, and must make sure that no other communication is being made within its radius of action; if it is otherwise, it shall await the first break, unless it finds that its call is not likely to disturb the communications in progress. The same applies when the station wishes to answer a call.

4. For making a call, every station shall use the normal wave of the station to be called.

5. If, in spite of these precautions, a radiotelegraphic transmission be impeded, the call must cease on the first request made by a coast station open to public correspondence. This station must then indicate the approximate duration of the wait.

6. The ship station must make known to each coast station to which it has notified its presence the time at which it proposes to cease its operations, and also the probable duration of the interruption.

ARTICLE 25.

1. The call comprises the signal — • — • —, the call-signal of the station called, sent three times, and the word "de" followed by the call-signal of the sending station, sent three times.

2. The station called shall reply by giving the signal — • — • —, followed by the call-signal, sent three times, of the calling station, by the word "de," its own call-signal, and the signal — • —

3. Stations which wish to enter into communication with ships, without, however, knowing the names of those ships which are within their radius of action, may use the signal — • — • — — • — (signal of enquiry). The provisions of paragraphs 1 and 2 are also applicable to the transmission of the signal of enquiry and to the reply to that signal.

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ARTICLE 26.

If a station when called does not apply when the call (Article 25) has been sent three times at intervals of two minutes, the call may not be resumed until after an interval of fifteen minutes, the station making the call first making sure of the fact that no radiotelegraphic communication is in progress.

ARTICLE 27.

Every station which has to make a transmission necessitating the use of high power shall first send out three times the warning signal — — • • — —, with the minimum of power necessary to reach the neighbouring stations. It shall not then begin to transmit with the high power until thirty seconds after sending the warning signal.

ARTICLE 28.

1. As soon as the coast station has replied, the ship station shall furnish it with the following information if it has messages to transmit to it; this information shall also be given when the coast station asks for it:—

(*a*) The approximate distance, in nautical miles, of the vessel from the coast station;

(*b*) The position of the ship given in a concise form, and adapted to the circumstances of the individual case;

(*c*) The next port at which the ship will touch;

(*d*) The number of radiotelegrams, if they are of normal length, or the number of words if the messages are of exceptional length.

The speed of the ship in nautical miles shall be given specially at the express request of the coast station.

2. The coast station shall reply giving, as provided in paragraph 1, either the number of telegrams or the number of words to be transmitted to the ship, and also the order of transmission.

3. If transmission cannot take place immediately, the coast station shall inform the ship station of the approximate length of the wait.

4. If a ship station when called cannot receive for the moment, it shall inform the calling station of the approximate length of the wait.

5. In the case of exchanges between two ship stations, it shall rest with the station called to fix the order of transmission.

ARTICLE 29.

When a coast station is called by several ship stations, it shall decide the order in which these stations shall be allowed to exchange their messages.

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In the regulation of this order, the coast station shall be guided solely by the necessity for allowing every station concerned to exchange the greatest possible number of radiotelegrams.

ARTICLE 30.

Before beginning to exchange correspondence the coast station shall inform the ship station whether the transmission is to be made in alternate order or by series (Article 23); it shall then begin to transmit, or shall follow up these instructions by the signal — • —

ARTICLE 31.

The transmission of a radiotelegram shall be preceded by the signal — • — • — and ended by the signal • — • — • followed by the call-signal of the sending station and by the signal — • —.

In the case of a series of radiotelegrams, the call-letter of the sending station and the signal — • — shall only be given at the end of the series.

ARTICLE 32.

When the radiotelegram to be transmitted contains more than 40 words the sending station shall interrupt the transmission by the signal • • — — • • after each series of 20 words or thereabouts, and it shall not resume the transmission until after having obtained from the station in correspondence the repetition of the last word clearly received, followed by the said signal, or, if the reception is clear, the signal — • —

In the case of transmission in series, the acknowledgment of receipt shall be given after each radiotelegram.

Coast stations engaged in transmitting long radiotelegrams must suspend transmission at the end of each period of 15 minutes, and must remain silent during a period of three minutes before continuing transmission.

Coast and ship stations which work in the conditions laid down in Article 35, paragraph 2, must suspend work at the end of each period of 15 minutes, and keep watch on the wavelength of 600 metres during a period of three minutes before continuing transmission.

ARTICLE 33.

1. When the signals become doubtful all possible resources must be drawn upon to accomplish transmission. To this end the radiotelegram shall be transmitted three times at most, at the request of the receiving station. If in spite of this triple transmission the signals are still unintelligible, the radiotelegram shall be cancelled.

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If the acknowledgment of receipt does not come to hand, the sending station shall again call the station with which it is in correspondence. When no reply is made after three calls the transmission shall not be persevered with. In such case, the sending station shall have the right to obtain the acknowledgment of receipt through the medium of another radiotelegraph station, using, when necessary, the lines of the telegraph system.

2. If the receiving station considers that, in spite of defective receiving, the radiotelegram can be delivered, it shall insert at the end of the preamble the service advice: "Réception douteuse," and shall forward the radiotelegram. In such case, the administration to which the coast station is subject shall claim the charges, in conformity with Article 42 of the present Regulations. Nevertheless, if the ship station later on transmits the radiotelegram to another coast station of the same administration, the latter can only claim the charges appertaining to a single transmission.

(d) *Acknowledgment of Receipt and End of Work.*

ARTICLE 34.

1. The acknowledgment of receipt shall be given in the form prescribed by the International Telegraph Regulations; it shall be preceded by the call-signal of the sending station and followed by the call-signal of the receiving station.

2. The end of the work between two stations shall be indicated by each one of them by means of the signal • • • — • — followed by its own call-signal.

(e) *Route to be taken by Radiotelegrams.*

ARTICLE 35.

1. As a general principle, the ship station shall transmit its radiotelegrams to the nearest coast station.

However, if the ship station has the choice between several coast stations at equal or nearly equal distances, it shall give the preference to that which is established on the territory of the country of destination or of normal transit of its radiotelegrams.

2. Nevertheless, a sender on board a ship shall have the right to indicate the coast station by which he wishes his radiotelegram to be forwarded. The ship station shall then wait until this coast station is the nearest.

Exceptionally, transmission may be made to a more distant coast station, provided—

(*a*) That the radiotelegram is intended for the country in which such coast station is situated, and that it comes from a ship subject to that country;

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(*b*) That for calls and transmission both stations use a wave-length of 1,800 metres;

(*c*) That transmission by this wave-length does not disturb any transmissions made, by meaus of the same wave-length, by a nearer coast station;

(*d*) That the ship station is more than 50 nautical miles distant from any coast station shown in the Nomenclature. The distance of 50 miles may be reduced to 25 miles subject to the reservation that the maximum power at the terminals of the generator do not exceed 5 kilowatts, and that the ship stations be established in conformity with Articles 7 and 8. This reduction of distance shall not apply in the seas, bays, or gulfs of which the shores belong to one country only, and of which the opening to the high sea is less than 100 miles wide.

7. Delivery of Radiotelegrams.

Article 36.

When for any cause whatever a radiotelegram coming from a ship at sea and intended for *terra firma* cannot be delivered to the addressee, an advice of non-delivery shall be sent out. This advice shall be transmitted to the coast station which received the original radiotelegram. The latter, after verifying the address, shall forward the advice to the ship, if possible, and, if need be, by way of another coast station of the same country or of a neighbouring country.

When a radiotelegram, having arrived at a ship station, cannot be delivered, that station shall inform the office or ship station of origin by means of a service advice. In the case of radiotelegrams coming from *terra firma* this advice shall be transmitted, whenever possible, to the coast station by way of which the radiotelegram passed, or, if necessary, to another coast station of the same country or of a neighbouring country.

Article 37.

If the ship to which a radiotelegram is addressed has not notified its presence to the coast station within the time specified by the sender, or, in the absence of such specification, up to the morning of the eighth day following, such coast station shall give notice of the fact to the office of origin, which shall inform the sender of the same.

This latter shall have the option of requiring by paid service advice, telegraphic or postal, addressed to the coast station, that his radiotelegram be kept for a fresh period of nine days, for transmission to the ship, and so on. In the absence of such request, the radiotelegram shall be returned as undelivered at

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the end of the ninth day (the day of handing in not to be included).

However, if the coast station is sure that the ship has left its radius of action before the station could have transmitted the radiotelegram to it, such station shall immediately inform the office of origin, which shall without delay advise the sender of the cancellation of the message. Nevertheless, the sender may, by paid service advice, request the coast station to transmit the radiotelegram when the ship next passes.

8. Special Radiotelegrams.

ARTICLE 38.

The following only shall be allowed:—

(1) *Reply-paid Radiotelegrams.* — These radiotelegrams shall bear, before the address, the indication "Réponse payée" or "RP" completed by the mention of the amount paid in advance for the reply, for example, "Réponse payée fr. x" or "RP fr. x."

The reply voucher issued on board a ship shall give the right to send, up to the limit of its value, a radiotelegram to any address whatever from the ship station which issues such voucher.

(2) *Collated Radiotelegrams;*

(3) *Express Delivery Radiotelegrams.*—But only in cases in which the amount of the cost of express delivery is collected from the addressee. The countries which cannot adopt these radiotelegrams must notify the fact to the International Bureau. Radiotelegrams for express delivery with collection of the cost from the sender may be allowed when they are intended for the country in whose territory the corresponding coast station is situated.

(4) *Radiotelegrams for Delivery by Post;*

(5) *Multiple Radiotelegrams;*

(6) *Radiotelegrams with Acknowledgment of Receipt.*—But only with regard to notification of the date and time at which the coast station has transmitted to the ship station the telegram addressed to the latter;

(7) *Paid Service Advices.*—Except those asking for repetition or information. Nevertheless, all paid service advices shall be allowed on the route over the telegraph lines;

(8) *Urgent Radiotelegrams.*—But only in transmission over the telegraph lines, and subject to the application of the International Telegraph Regulations.

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ARTICLE 39.

Radiotelegrams may be transmitted by a coast station to a ship, or by a ship to another ship, with the object of being forwarded by post, the posting to take place from a port of call of the receiving ship.

Such radiotelegrams do not include any radiotelegraphic retransmission.

The address of these radiotelegrams must be drawn up as follows:—

(1) Paid instruction "poste" followed by the name of the port where the radiotelegram is to be posted;
(2) Full name and address of the addressee;
(3) Name of the ship station which is to carry out the posting;
(4) When necessary, name of the coast station.

Example: Poste Buenosaires Martinez 14 Calle Prat Valparaiso Avon Lizard.

The charge shall include, as well as the radiotelegraph and telegraph charges, a sum of 25 centimes for the postage of the radiotelegram.

9. Archives.

ARTICLE 40.

The originals of radiotelegrams, as well as the documents relating thereto, retained by the administrations, shall be kept with all necessary precautions in respect of secrecy for at least 15 months, counting from the month following that in which the radiotelegrams were handed in.

These originals and documents shall be sent, as far as possible, at least once a month by the ship stations to the administrations to which they are subject.

10. Refunds and Reimbursements.

ARTICLE 41.

1. With regard to refunds and reimbursements, the provisions of the International Telegraph Regulations shall apply, bearing in mind the restrictions laid down in Articles 38 and 39 of the present Regulations and subject to the following reservations:—

The time occupied in radiotelegraphic transmission, and also the time during which the radiotelegram remains at the coast station in the case of radiotelegrams addressed to ships, or in the ship station in the case of radiotelegrams originating in ships, shall not be counted in the period of delay giving rise to refunds and reimbursements.

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If the coast station informs the office of origin that a radiotelegram cannot be transmitted to the ship to which it is addressed, the administration of the country of origin shall immediately initiate the re-imbursement to the sender of the coast and ship charges in respect of such radiotelegram. In this case, the charges reimbursed shall not appear in the account for which provision is made by Article 42, but the radiotelegram shall be mentioned therein as a memorandum.

Reimbursements shall be borne by the various administrations and private enterprises which have taken part in the forwarding of the radiotelegram, each one of them relinquishing its share of the charge. Nevertheless, radiotelegrams falling under the provisions of Articles 7 and 8 of the Convention of St. Petersburg shall remain subject to the provisions of the International Telegraph Regulations, except when it is due to an error of service that such radiotelegrams have been accepted.

When the acknowledgment of receipt of a radiotelegram has not reached the station which transmitted the message, the charge shall not be refunded until it has been proved that the radiotelegram is one which gives occasion for reimbursement.

11. Accounting.

ARTICLE 42.

1. Coast and ship charges shall not be entered in the accounts provided for by the International Telegraph Regulations.

The accounts relating to these charges shall be settled by the administrations of the countries concerned. They shall be prepared by the administrations to which the coast stations belong, and communicated by them to the administrations concerned. In cases in which the working of the coast stations is independent of the administration of the country, the person working these stations may be substituted in respect of accounts for the administration of such country.

2. As to transmission over the lines of the telegraph system, the radiotelegram shall be treated, in respect of accounts, in conformity with the Telegraph Regulations.

3. In the case of radiotelegrams originating from ships, the administration to which the coast station is subject shall debit the administration to which the ship station of origin is subject with the coast and ordinary telegraph charges, the total charges collected for prepaid replies, the coast and telegraph charges collected for collations, the charges appertaining to express delivery (in the case provided for in Article 38) or delivery by post, and with those collected for supplementary copies (TM). The administration to which the coast station is subject shall credit, when the case arises, through the channel of the

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telegraph accounts and through the medium of the offices which have taken part in the transmission of the radiotelegrams, the administration to which the office of destination is subject, with the total charges relating to prepaid replies. With regard to telegraph charges and charges relating to express delivery or delivery by post and to supplementary copies, the procedure shall be in conformity with the Telegraph Regulations, the coast station being regarded as the telegraph office of origin.

In the case of radiotelegrams intended for a country lying beyond that to which the coast station belongs, the telegraph charges to be liquidated conformably to the above provisions are those which arise either from tables " A " and " B " appended to the International Telegraph Regulations, or from special arrangements concluded between the administrations of adjoining countries, and published by those administrations, and not the charges which might be made, under the special provisions of Articles 23, paragraph 1, and 27, paragraph 1, of the Telegraph Regulations.

In the case of radiotelegrams and paid service advices addressed to ships, the administration to which the office of origin is subject shall be debited directly by that to which the coast station is subject with the coast and ship charges. Nevertheless, the total charges appertaining to prepaid replies shall be credited, if there is occasion, from country to country, through the channel of the telegraph accounts, until they reach the administration to which the coast station is subject. In respect of the telegraph charges and charges relating to delivery by post and for supplementary copies, the procedure shall be in conformity with the Telegraph Regulations. The administration to which the coast station is subject shall credit that to which the ship of destination is subject with the ship charge, if there is occasion with the charges belonging to the intermediate ship stations, with the total charge collected for prepaid replies, with the ship charge relating to collation, and also with the charges made for preparing supplementary copies and for delivery by post.

The paid service advices and the prepaid replies themselves shall be treated, in the radiotelegraph accounts, in all respects like other radiotelegrams.

In the case of radiotelegrams forwarded by means of one or two intermediate ship stations each of the latter shall debit the ship station of origin, if the radiotelegram is one coming from a ship, or the ship station of destination if the radiotelegram is one intended for a ship, with the ship charge due to it for transit.

4. In principle, the settlement of accounts appertaining to exchanges between ship stations shall be made directly as between the companies working those stations, the station of origin being debited by the station of destination.

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5. The monthly accounts serving as a basis for the special accounting in respect of radiotelegrams shall be drawn up radiotelegram by radiotelegram, with all necessary particulars, and within a period of six months, counting from the month to which they belong.

6. The Governments reserve to themselves the option of making between themselves and with private companies (contractors working radiotelegraph stations, shipping companies, &c.), special arrangements with a view to the adoption of other provisions respecting accounts.

12. International Bureau.

ARTICLE 43.

The supplementary expenses resulting from the work of the International Bureau, in connection with radiotelegraphy, must not exceed 80,000 fr. per annum, not including special expenses to which the meeting of an International Conference gives rise. The administrations of the Contracting States shall be, for purposes of contribution to the expenses, divided into six classes, as follows :—

1st class :

Union of South Africa, Germany, United States of America, Alaska, Hawaii and the other American possessions in Polynesia, the Philippine Islands, Porto Rico and the American possessions in the Antilles, the zone of the Panama Canal, the Argentine Republic, Australia, Austria, Brazil, Canada, France, Great Britain, Hungary, British India, Italy, Japan, New Zealand, Russia, Turkey.

2nd class :

Spain.

3rd class :

Russian Central Asia (littoral of the Caspian Sea), Belgium, Chile, Chosen, Formosa, Japanese Sakhalin and the leased territory of Kwantung, Netherland Indies, Norway, Netherlands, Portugal, Roumania, Western Siberia (littoral of the Arctic Ocean), Eastern Siberia (littoral of the Pacific Ocean), Sweden.

4th class :

German East Africa, German South-West Africa, the Cameroons, Togo, German Pacific Protectorates, Denmark, Egypt, Indo-China, Mexico, Siam, Uruguay.

5th class :

French West Africa, Bosnia-Herzegovina, Bulgaria, Greece, Madagascar, Tunis.

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6th class :

French Equatorial Africa, Portuguese West Africa, Portuguese East Africa and the Portuguese possessions in Asia, Bokhara, the Belgian Congo, the Colony of Curaçao, the Spanish colony of the Gulf of Guinea, Erithrea, Khiva, Morocco, Monaco, Persia, San Marino, Italian Somaliland.

ARTICLE 44.

The various administrations shall forward to the International Bureau a form modelled on that hereto appended, and containing the particulars enumerated in the said form with regard to the stations covered by Article 5 of the Regulations. Any modifications which may take place and additions shall be communicated by the administrations to the International Bureau from the 1st to the 10th of each month. With the help of these communications the International Bureau will draw up the nomenclature provided for by Article 5. The nomenclature shall be distributed to the administrations concerned. It may also, with the supplements relating thereto, be sold to the public at the cost price.

The International Bureau shall take care that the adoption of identical call-signals for radiotelegraph stations be avoided.

13. Meteorological Transmissions, Time Signals, and other Transmissions.

ARTICLE 45.

1. The administrations shall take the necessary steps to supply their coast stations with meteorological telegrams containing the particulars of interest to the district of such stations. These telegrams, the text of which must not exceed 20 words, shall be sent to the ships which ask for them. The charge for these meteorological telegrams shall be carried to the account of the ships to which they are addressed.

2. The meteorological observations, made by certain ships appointed for that purpose by the country to which they belong, may be sent once a day, as paid service advices, to the coast stations authorised to receive them by the administrations concerned, who shall also appoint the meteorological offices to which these observations shall be addressed by the coast stations.

3. Time signals and meteorological telegrams shall be transmitted in succession one to another in such a way that the total duration of their transmission does not exceed 10 minutes. In principle, while they are being sent, all radiotelegraph stations, transmission by which might disturb the reception of these signals and telegrams, shall keep silent so as to allow all

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stations which desire to do so to receive these telegrams and signals. An exception shall be made in the case of distress calls and State telegrams.

4. The administration shall facilitate the communication, to the marine information agencies which they may appoint, of the information respecting wrecks and casualties at sea, or presenting a general interest for navigation, which the coast stations can communicate regularly.

14. Various Provisions.

ARTICLE 46.

Transmissions exchanged between ship stations must be carried out in such a way as not to interfere with the service of coast stations, as the latter must have, as a general rule, right of priority for public correspondence.

ARTICLE 47.

Coast stations and ship stations shall be bound to take part in the retransmission of radiotelegrams in cases in which communication cannot be established directly between the stations of origin and destination.

Nevertheless the number of re-transmissions shall be limited to two.

In the case of radiotelegrams intended for *terra firma* use may only be made of retransmissions to reach the nearest coast station.

Retransmission shall be in all cases subject to the condition that the intermediate station which receives the radiotelegram in transit is in a position to send it on.

ARTICLE 48.

If the transmission of a radiotelegram is carried out partly on the telegraph lines or through radiotelegraph stations belonging to a non-contracting Government, such radiotelegram may be sent forward, subject to the reservation that, at least, the administrations to which these lines or stations belong shall have declared that they are willing to apply, when the case arises, the provisions of the Convention and of the regulations, which are indispensable, in order that radiotelegrams may be regularly forwarded and that the accounting shall be assured.

Such declaration shall be made to the International Bureau, and brought to the knowledge of the offices of the Telegraph Union.

ARTICLE 49.

The modifications of the present regulations which may be rendered necessary in consequence of the decisions of future

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telegraph conferences, shall come into force on the date fixed for the application of the provisions decided upon by each one of these latter conferences.

ARTICLE 50.

The provisions of the International Telegraph Regulations shall apply by analogy to radiotelegraph correspondence in so far as they are not contrary to the provisions of the present regulations.

The following, in particular, apply to radiotelegraph correspondence: The provisions of Article 27, paragraphs 3 to 6, of the Telegraph Regulations referring to the collection of charges; those of Articles 36 and 41 referring to the indication of the route to be taken; those of Articles 75, paragraph 1; 78, paragraphs 2 to 4; and 79, paragraphs 2 and 4, relating to preparing of accounts. Nevertheless:

1. The period of six months provided by paragraph 2 of Article 79 of the Telegraph Regulations for the verification of accounts is extended to nine months in the case of radiotelegrams.

2. The provisions of Article 16, paragraph 2, are not considered as authorising the free transmission by radiotelegraph stations of service telegrams relating exclusively to the telegraph service, nor the free transmission over the lines of the telegraph system of service telegrams relating exclusively to the radiotelegraph service.

3. The provisions of Article 79, paragraphs 3 and 5, do not apply to radiotelegraph accounting.

For the purposes of applying the provisions of the Telegraph Regulations coast stations shall be regarded as offices of transit, except when the Radiotelegraph Regulations stipulate expressly that these stations are to be considered as offices of origin or destination.

Conformably to Article 11 of the Convention of London the present regulations will come into force on the 1st of July, 1913.

In witness whereof the respective Plenipotentiaries have signed these regulations on a single copy, which will remain deposited in the archives of the British Government, and of which a copy will be sent to each party.

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APPENDIX I.

Form of Official List of Stations.

Administration of _____

Particulars of Radiotelegraph Stations.

(a) *Coast Stations.*

1. Name and Nationality.	2. Geographical Position.	3. Call-Signal.	4. Normal Range in Nautical Miles.	5. System of Radiotelegraphy with the Characteristics of the System of Emission.	6. Wave-lengths in Metres (the normal Wave-length is underlined).	7. Nature of Services performed.	8. Hours of Service (showing Time according to the Region or Meridian).	9. Coast Charge.		10. Observations (including Time and Method of sending Time-signals and Meteorological Telegrams, in cases where these are sent).
								Per Word, in Francs.	Minimum per Radiotelegram, in Francs.	

(b) *Ship Stations.*

1. Name and Nationality.	2. Call-Signal.	3. Normal Range in Nautical Miles.	4. System of Radiotelegraphy with the Characteristics of the System of Emission.	5. Wave-lengths in Metres (the normal Wave-length is underlined).	6. Nature of Services performed.	7. Hours of Service.	8. Ship Charge.		9. Observations (including, if necessary, Name and Address of the Person working the Station).
							Per Word, in Francs.	Minimum per Radiotelegram, in Francs.	

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APPENDIX II.

International Morse Code.

The following table shows the signals employed in working the Morse, Hughes, and Baudot instruments:—

International Morse Code Signals.

Letters:

a ▪ ▬
ä ▪ ▬ ▪ ▬
á or å ▪ ▬ ▬ ▪ ▬
b ▬ ▪ ▪ ▪
c ▬ ▪ ▬ ▪
ch ▬ ▬ ▬ ▬
d ▬ ▪ ▪
e ▪
é ▪ ▪ ▬ ▪ ▪
f ▪ ▪ ▬ ▪
g ▬ ▬ ▪
h ▪ ▪ ▪ ▪
i ▪ ▪
j ▪ ▬ ▬ ▬
k ▬ ▪ ▬
l ▪ ▬ ▪ ▪
m ▬ ▬
n ▬ ▪
ñ ▬ ▬ ▪ ▬ ▬
o ▬ ▬ ▬
ö ▬ ▬ ▬ ▪
p ▪ ▬ ▬ ▪
q ▬ ▬ ▪ ▬
r ▪ ▬ ▪
s ▪ ▪ ▪
t ▬
u ▪ ▪ ▬
ü ▪ ▪ ▬ ▬
v ▪ ▪ ▪ ▬
w ▪ ▬ ▬
x ▬ ▪ ▪ ▬
y ▬ ▪ ▬ ▬
z ▬ ▬ ▪ ▪

Spacing and length of signals:
1. A bar is equal to 3 dots.
2. The space between the signals which form the same letter is equal to 1 dot.
3. The space between two letters is equal to 3 dots.
4. The space between two words is equal to 5 dots.

Figures:

1 ▪ ▬ ▬ ▬ ▬
2 ▪ ▪ ▬ ▬ ▬
3 ▪ ▪ ▪ ▬ ▬
4 ▪ ▪ ▪ ▪ ▬
5 ▪ ▪ ▪ ▪ ▪
6 ▬ ▪ ▪ ▪ ▪
7 ▬ ▬ ▪ ▪ ▪
8 ▬ ▬ ▬ ▪ ▪
9 ▬ ▬ ▬ ▬ ▪
0 ▬ ▬ ▬ ▬ ▬

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App. II.

In official repetitions and in the preamble of radiotelegrams figures must be rendered by the following signals, which may also be used in the text of radiotelegrams written entirely in figures. In the latter case the message must bear the service instruction "in figures" :—

1 ▪ ▬
2 ▪ ▪ ▬
3 ▪ ▪ ▪ ▬
4 ▪ ▪ ▪ ▪ ▬
5 ▪ ▪ ▪ ▪ ▪
6 ▬ ▪ ▪ ▪ ▪
7 ▬ ▪ ▪ ▪
8 ▬ ▪ ▪
9 ▬ ▪
0 ▬

Punctuation and other Signs :

Full stop	(.)	▪ ▪ ▪ ▪ ▪ ▪
Semicolon	(;)	▬ ▪ ▬ ▪ ▬ ▪
Comma	(,)	▪ ▬ ▪ ▬ ▪ ▬
Colon	(:)	▬ ▬ ▬ ▪ ▪ ▪
Note of interrogation, or request for the repetition of anything transmitted which is not understood	(?)	▪ ▪ ▬ ▬ ▪ ▪
Note of exclamation	(!)	▬ ▬ ▪ ▪ ▬ ▬
Apostrophe	(')	▪ ▬ ▬ ▬ ▬ ▪
Hyphen or dash	(-)	▬ ▪ ▪ ▪ ▪ ▬
Bar indicating fraction	(/)	▬ ▪ ▪ ▬ ▪
Parentheses (before and after the words)	( )	▬ ▪ ▬ ▬ ▪ ▬
Inverted commas (before and after each word or each passage placed between inverted commas)	("et")	▪ ▬ ▪ ▪ ▬ ▪
Underline (before and after the words or part of phrase)		▪ ▪ ▬ ▬ ▪ ▬
Call (preliminary of every transmission)		▬ ▪ ▬ ▪ ▬
Double dash (=) (signal separating the preamble from the address, the address from the text, and the text from the signature)		▬ ▪ ▪ ▪ ▬
Understood		▪ ▪ ▪ ▬ ▪
Error		▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪
Cross (end of transmission) (+)		▪ ▬ ▪ ▬ ▪
Invitation to transmit		▬ ▪ ▬
Wait		▪ ▬ ▪ ▪ ▪
"Received" Signal		▪ ▬ ▪
End of work		▪ ▪ ▪ ▬ ▪ ▬

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APPENDIX III.

The following list of abbreviations has been prepared for the use of British ships and coast stations licensed by the Postmaster-General in accordance with the list annexed to Article 22 of the Service Regulations to the International Radiotelegraph Convention of 1912.

In the use of these abbreviations, the signal employed should be repeated three times.

The addition of the mark of interrogation ▪ ▪ ▬ ▬ ▪ ▪ indicates that the sentence is being put as a question.

Examples.

Station.		
A	QRA ?	= What is the name of your station ?
B	QRA Campania	= This is the Campania.
A	QRG ?	= To what Company or line of navigation do you belong ?
B	QRG Cunard QRZ	= I belong to the Cunard line. Your signals are weak.

Station A then increases the power of its transmitter and sends :—

A	QRK ?	= How are you receiving ?
B	QRK	= I am receiving well.
	QRB 80	= The distance between our stations is 80 nautical miles.
	QRC 62	= My true bearings are 62 degrees, &c.

[*See over for list of abbreviations.*]

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Abbreviation.	Question.	Answer or advice.
1.	2.	3.
— · — ·	— — · — (C Q)	General call to all stations.
— · · — ·	(T R)	Prefix for preliminary correspondence.
— — · · — —	(!)	Station is about to send with high power.
PRB	Do you wish to communicate with my station by means of the International Signal Code?	I wish to communicate with your station by means of the International Signal Code.
QRA	What is the name of your station?	This station is ——
QRB	How far are you from my station?	The distance between our stations is —— nautical miles.
QRC	What are your true bearings?	My true bearings are —— degrees.
QRD	Where are you bound?	I am bound for ——
QRF	Where are you coming from?	I am coming from ——
QRG	To what company or line of navigation do you belong?	I belong to ——
QRH	What is your wave-length?	My wave-length is —— metres.
QRJ	How many words have you to transmit?	I have —— words to transmit.
QRK	How are you receiving?	I am receiving well.
QRL	Are you receiving badly? Shall I transmit · · · — · 20 times for you to adjust your apparatus?	I am receiving badly. Transmit · · · — · 20 times for me to adjust my apparatus.
QRM	Are you being interfered with?	I am being interfered with.
QRN	Are the atmospherics very strong?	The atmospherics are very strong.
QRO	Shall I increase my power?	Increase your power.
QRP	Shall I decrease my power?	Decrease your power.
QRQ	Shall I transmit faster?	Transmit faster.
QRS	Shall I transmit slower?	Transmit slower.
QRT	Shall I stop transmitting?	Stop transmitting.
QRU	Have you anything for me?	I have nothing for you.
QRV	Are you ready?	I am ready. All is in order.
QRW	Are you busy?	I am busy with another station [or with ——] Please do not interrupt.
QRX	Shall I stand by?	Stand by. I will call you at —— o'clock [or: when required.]
QRY	What is my turn?	Your turn is No. ——
QRZ	Are my signals weak?	Your signals are weak.
QSA	Are my signals strong?	Your signals are strong.
QSB	Is my tone bad? / Is my spark bad?	The tone is bad. / The spark is bad.
QSC	Is my spacing bad?	Your spacing is bad.
QSD	Let us compare watches. My time is ——. What is your time?	The time is ——

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Abbreviation.	Question.	Answer or advice.
1.	2.	3.
QSF	Are the radiotelegrams to be transmitted alternately or in series ?	The radiotelegrams are to be transmitted alternately.
QSG	- - - - - - -	The transmission will be in series of 5 radiotelegrams.
QSH	- - - - - - -	The transmission will be in series of 10 radiotelegrams.
QSJ	What is the rate per word to —— ?	The rate per word is ——
QSK	Is the last radiotelegram cancelled ?	The last radiotelegram is cancelled.
QSL	Have you got the receipt ?	Please give a receipt.
QSM	What is your true course ?	My true course is —— degrees.
QSN	Are you communicating with land ?	I am not communicating with land.
QSO	Are you in communication with another station (or: with ——) ?	I am in communication with —— (through the medium of ——).
QSP	Shall I signal to —— that you are calling him ?	Inform —— that I am calling him.
QSQ	Am I being called by —— ?	You are being called by ——
QSR	Will you despatch the radiotelegram —— ?	I will forward the radiotelegram.
QST	Have you received a general call ?	I have received a general call for all stations.
QSU	Please call me when you have finished [or: at —— o'clock] ?	I will call you when I have finished.
QSV	Is public correspondence engaged ?	Public correspondence is engaged. Please do not interrupt.
QSW	Must I increase the frequency of my spark ?	Increase the frequency of your spark.
QSX	Must I diminish the frequency of my spark ?	Diminish the frequency of your spark.
QSY	Shall I transmit with a wavelength of —— metres ?	Let us transfer to the wavelength of —— metres.
QSZ	- - - - - - -	Transmit each word twice. I have difficulty in receiving your signals.
QTA	- - - - - - -	Transmit each radiotelegram twice. I have difficulty in receiving your signals, or Repeat the radiotelegram you have just sent. Reception doubtful.

In addition to these signals, which, it will be observed, are uniform in construction, the following signals of the international telegraph code may be used in these communications :—

▪ ▪ ▬ ▬ ▪ ▪ "Repeat" sign (as well as mark of interrogation).

▪ ▪ ▪ ▬ ▪ Understood.

▪ ▬ ▪ ▪ ▪ Wait.

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APPENDIX IV.

Service Advices.

The preamble of a service advice consists of (1) the prefix A (Section 75); (2) the names of the offices of destination and origin, with "de" between them; (3) the number of the service message (whether a local check number or an international number—Section 61); and (4) the date of handing in.

A service advice has no address or signature, the preamble giving the necessary indication of the offices of destination and origin.

In the text of a service advice exchanged between a ship and a coast station, the radiotelegram to which it relates is designated by (1) its number (local or international, as the case may be), (2) the date on which it was handed in (to be written entirely in words), and (3) the name of the addressee (together with the full address in cases of non-delivery). Then follows the communication.

In the following specimen service advices the commencing sign (— · — · —), the break sign (— · · · —), and the finishing sign (· — · — ·), are inserted where necessary.

Specimen Service Advices.

1. Ship station advises office of origin of non-delivery of radiotelegram (*see* Section 27) :—

— · — · — A Wrexham de A B C 15 23 — · · · — 14 twentysecond Williams addressee not on board · — · — ·

Here "Wrexham" is the office for which the service advice is intended; A B C the call-signal of the ship; 15 the local check number of the service advice; 23 the day of the month on which the service advice is sent; 14 the local check number of the original radiotelegram; "twentysecond" the day of the month on which the original radiotelegram was handed in; "Williams" the name of the addressee; and "addressee not on board" the reason for non-delivery.

Other more or less common reasons for non-delivery on board ship are usually indicated as follows:—addressee no longer on board; addressee unknown; addressee deceased; refused.*

(*See* below for the procedure of the coast station in forwarding this service advice on to its destination.)

2. Coast station, having been advised by office of destination of non-delivery of radiotelegram from ship, transmits this advice to ship station (*see* Section 22) :—

— · — · — A A B C de Wrexham 29 11 — · · · — 15 tenth Jones 58 South St. Wrexham addressee unknown · — · — ·

Other more or less common reasons for non-delivery are usually indicated as follows:—addressee left; addressee deceased; addressee not arrived; address not registered; address no longer registered; refused.*

* For the French equivalents of phrases ordinarily used in service messages, *see* the end of this Appendix.

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3. Ship station, having received advice of non-delivery (as in 2 above), informs office of origin of the service message of discrepancy in address (*see* Section 22) :—

▬ ▪ ▬ ▪ ▬ A Wrexham de A B C 5 11 ▬ ▪ ▪ ▪ ▬ 15 tenth read Jones 38 South St. Wrexham repeat 38 ▪ ▬ ▪ ▬ ▪

This indicates that there had been an error in the number, and the word (or group of words or figures) in which the error occurred is repeated, the word "repeat" being prefixed. If the error had been (*e.g.*) the substitution of *Street* for *Place*, the text of the foregoing service advice would have read "15 tenth read Jones 58 South Place Wrexham repeat Place."

A coast station, in sending on to the office of destination a service advice received from a ship, should turn it into the form usual in inland service messages, the original radiotelegram being then designated not by its number in the radiotelegraphic transmission, but by the letter code which was given to it on the ordinary telegraph system. Similarly, the ordinary inland form of service message should be used by the coast station in informing the office of origin that the ship for which a radiotelegram was intended has passed out of range, or has not signalled its presence. The phrases to be used in these cases are "ship out of range" and "ship not signalled" respectively.

If necessary, the service message forwarded by the coast station will be turned into French at a later stage.

French Equivalents.

A British ship or coast station, in sending a service message to a station which does not habitually communicate in English, should use French terms in the text so far as possible. French equivalents of some of the commonest words and phrases are given below :—

English.	*French.*
Addressee.	Destinataire.
Unknown.	Inconnu.
Left.	Parti.
Not on board.	Pas à bord.
No longer on board.	Plus à bord.
Deceased.	Décédé.
Address.	Adresse.
Not registered.	Pas enregistrée.
No longer registered.	Plus enregistrée.
Refused.	Refusé.
For.	Pour.
Repeat.	Répétons.
Already.	Déjà.
Delivered.	Remis.
Deliver.	Remettez.
Cancel.	Annulez.
Replace.	Remplacez.
Read.	Lisez.
Reply paid.	Réponse payée.
Radiotelegram to be repeated.	Collationnement.
Posted as a registered letter.	Poste recommandée.
Charge for porterage prepaid.	Exprès payé.

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English.	*French.*
Radiotelegram to be called for at a Telegraph Office.	Télégraphe Restant.
Radiotelegram to be called for at a Post Office.	Poste Restante.
Radiotelegram with multiple addresses.	—— adresses.
All addresses of a multiple address radiotelegram to be communicated to addressee.	Communiquer toutes adresses.
Radiotelegram to be given priority (as "urgent").	Urgent.

APPENDIX V.

Examination for Wireless Telegraph Operators on board Ships.

1. It is necessary for persons operating wireless telegraph apparatus on board ships registered in the United Kingdom to hold either a 1st or a 2nd class certificate of competency from the Postmaster-General, in accordance with Article 10 of the Regulations annexed to the International Radiotelegraph Convention. The certificates will certify that the operator:—

(*a*) is able to send and receive, by sound, messages in plain language in the International Morse Code at a rate of not less than 20 words per minute (five letters being counted as one word) for a 1st Class Certificate; and,

(*b*) is able to send and receive by sound messages in plain language in the International Morse Code at a rate of from 12 to 19 words per minute (five letters being counted as one word) for a 2nd Class Certificate; and

(*c*) is able to adjust the apparatus ordinarily used in some well-known system of wireless telegraphy so as to suit the varying conditions of working, without using excessive transmitting power; and

(*d*) has an efficient working knowledge of the regulations applicable to the exchange of radiotelegraphic traffic.

2. Candidates will be expected—

(*a*) To send on an ordinary Morse Key for five consecutive minutes at not less than the prescribed speed. The accuracy of signalling, the correct formation of the letters, and the correctness of spacing will be taken into account;

(*b*) To receive and write legibly at the prescribed speed from a double headgear telephone receiver as ordinarily used for radiotelegraphic reception;

(*c*) To understand simple diagrams of the electrical connections of the apparatus used in the system in which he is being examined;

(*d*) To be able to connect up the apparatus with the help of such diagrams so far as this is required in the system in which he is being examined;

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(*e*) To name the principal parts of the apparatus and indicate their use;

(*f*) To mention the most common faults, and the means usually taken to remedy them in the system in which he is being examined;

(*g*) To explain the steps taken to change from one wave-length to another, in sending and receiving, in the system in which he is being examined.

The practical examination will embrace the following :—

(*a*) Connecting up the apparatus.

(*b*) Operating (sending and receiving).

(*c*) Regulating and adjusting.

(*d*) Altering the wave-length.

(*e*) Reducing or increasing the transmitting power.

(*f*) Tracing and clearing faults.

The examination in regard to the actual transmission of messages will be based upon the rules contained in this handbook.

3. Candidates for examination must fill up a form of application (specimen annexed) and return it to the Secretary, G.P.O., London. The date and place of examination will be notified to the candidate as soon as possible after receipt of the application.

4. Candidates for examination will be required to pay an examination fee of 5*s*. This should be paid by means of postage stamps affixed to the form of application.

5. Examinations will generally be conducted at the General Post Office, London. Special arrangements may be made, where circumstances permit, for holding an examination at any wireless station or any technical school of telegraphy at which suitable apparatus is provided for the purpose.

6. If the candidate satisfactorily passes the examination, he will be required to make a declaration that he will observe the secrecy of radiotelegrams which come to his knowledge in the course of duty.

7. The certificate of competency will indicate the system or systems of radiotelegraphy under which the candidate's examination was conducted.

8. In case of failure a candidate will not ordinarily be re-examined until after the lapse of three months. An additional fee will be payable in respect of the further examination.

9. Should the holder of a certificate of competency be proved to the satisfaction of the Postmaster-General wilfully or negligently to have failed to comply with the provisions of the International Radiotelegraph Convention and Regulations, or any other regulations which may be issued from time to time for his guidance, the certificate may be endorsed or suspended.

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Postage Stamps to the value of 5*s.* to be affixed here.

Form of Application for Permission to Attend Examination for Certificate of Competency as Wireless Telegraph Operator on Board British Ships.

The Secretary,
G.P.O., London.

Sir,

I beg to inform you that I wish to obtain a certificate qualifying me to act as Wireless Telegraph Operator on board British ships. I declare that I am of British nationality.

I am, Sir,
Your obedient Servant,

Name in full _____

Place and date of birth _____

Address to which it is desired that the Order for Examination shall be sent _____

System or systems in which examination is desired :—

_____

Place at which the candidate would prefer to be examined* _____

* Every endeavour will be made to meet the convenience of candidates in this respect, but no assurance can be given that the examination will be held at the place specified.

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APPENDIX VI.

No.

UNITED KINGDOM OF GREAT BRITAIN AND IRELAND.

CERTIFICATE OF PROFICIENCY IN RADIOTELEGRAPHY GRANTED BY THE POSTMASTER-GENERAL.

First Class.

This is to certify that, under the provisions of the Radiotelegraph Convention, 1912, Mr. has been examined in Radiotelegraphy and has passed in—

(*a*) The working and adjustment of apparatus.

(*b*) Transmission and sound-reading at a speed of not less than 20 words a minute.

(*c*) Knowledge of the regulations applicable to the exchange of radiotelegraphic traffic.

The holder's practical knowledge of adjustment was tested on a set of apparatus.* His knowledge of other systems is shown below.

_____

_____

It is also certified hereby that the holder has made a declaration that he will preserve the secrecy of correspondence.

Signature of examining officer_____

The holder of this certificate is therefore authorised to operate wireless telegraph apparatus as a first-class operator on board a British ship.

_____for Secretary G.P.O., London.

_____(Date).

Signature of holder _____

Date of Birth Place of Birth

* It is not intended to limit the employment of the holder to a particular system, but merely to indicate the particular system in which he was tested for adjustment of apparatus.

2*s.* 6*d.* will be charged for each duplicate copy of this certificate.

N.B.—This certificate may be endorsed, or withdrawn, at the discretion of the Postmaster-General, in the case of misconduct or breach of the Regulations on the part of holder. Unless so withdrawn, it will continue to be valid so long as the Regulations of the Radiotelegraph Convention concluded in London in 1912 remain in force.

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654.1 R300 c.1
Handbook for wireless telegraph oper
087 324 794
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